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THE JOURNAL

OF

PSYCHOLOGICAL MEDICINE

AND

MENTAL PATHOLOGY.

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CONTENTS.

	PAGE
"IN MEMORIAM"	v
MATERIALISM.—By J. M. WINN, M.D.	1
TREATMENT OF MELANCHOLIA.—By BRIERRE DE BOISMONT, M.D.	21
OPIOPHAGISM, OR PSYCHOLOGY OF OPIUM-EATING.—By W. A. F. BROWNE, Esq.	38
WILL AND VOLITION.—By W. H. O. SANKEY, M.D.	56
RELIGIOUS INSANITY METAPHYSICALLY CONSIDERED.—By THE EDITOR.	67
MIND	80
THE DELUSIONS OF THE INSANE.—By J. G. DAVEY, M.D.	88
ON THE ARTIFICIAL FEEDING OF THE INSANE.—By H. SUTHERLAND, M.D.	98
DIPSOMANIA	116
VISIT TO ST. CLEMENT'S ASYLUM, VENICE	132
HALLUCINATION OF SATANIC POSSESSION INDUCED BY A VESICAL CALCULUS.—By J. M. WINN, M.D., M.R.C.P., &c.	134

Reviews.

AN INTRODUCTION TO HUMAN ANATOMY.—By PROFESSOR TURNER	136
INSANITY IN MASSACHUSETTS.—STATE REPORT	139
FRAGMENTARY PAPERS OF SCIENCE.—By SIR H. HOLLAND, BART.	140
BUILDING OF A BRAIN.—By DR. CLARKE	151
CHEERFUL WORDS.—EDITED BY W. HYSLOP, ESQ.	153
FREE PHOSPHORUS IN MEDICINE.—By J. A. THOMPSON, ESQ.	153
WEST RIDING REPORTS.—By DR. CRICHTON BROWNE	154
PSYCHOLOGICAL RETROSPECT AND MEDICO-LEGAL TRIALS	i
RECENT APPOINTMENTS	x

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PREFACE.



THE JOURNAL of PSYCHOLOGICAL MEDICINE was the first of its kind published in this country, and was edited by the late Dr. Forbes Winslow during a period of sixteen years.

The Editor of the New Series wishes briefly to state that the Journal will be conducted on the same principles as those adopted by his father, and that neither time nor labour will be spared to make it worthy of its former reputation.

L. S. FORBES WINSLOW.

CAVENDISH SQUARE: *April* 1875.

“IN MEMORIAM.”

FORBES BENIGNUS WINSLOW, M.D., D.C.L. HON. OXON.

WE cannot allow this first number of the New Series of the “Psychological Journal” to issue from the press without paying a sincere tribute of respect and affection to one who was associated with the journal, as editor and proprietor, from its earliest days.

Dr. Forbes Winslow, following in the steps of Pinel and the Tukes of York, was, with the late Dr. Conolly, one of the first to systematise a gentle, persuasive, and loving treatment of the insane, who had hitherto been regarded in the light of wild beasts, to be curbed and restrained by bolts, bars, and keepers’ whips, rather than as human beings, fallen, indeed, from their high state, but amenable to tenderness and judicious kindness.

He it was who created the science of Psychology, and gave to it a local habitation and a name, at least so far as this country is concerned. He was the first physician who urged the plea of insanity in criminal cases: a plea which has outlived the assaults of popular clamour and ignorance, and is now accepted as valid in the courts of law.

He likewise has contributed largely to the literature of his country, his *magnum opus*, “The Obscure Diseases of the Brain and Mind,” being one of the scientific classics of the English language.

These achievements, combined with his successful ministry to “the mind diseased,” and his unvarying kindness, generosity, and deep religious feeling, have earned for him a world-wide reputation, a reputation

which, we can confidently predict, will shine with purer and clearer lustre as time allows of full justice being done to the great work he has accomplished.

Dr. Forbes Winslow is now happily beyond the reach of all human criticism; the work of his anxious life consummated, he sleeps well. Nevertheless, it may be pleasing to our readers, as well as gratifying to ourselves, if we briefly recall some incidents of his remarkable career. Dr. Forbes Winslow, the ninth son of Capt. Thomas Winslow, of Her Majesty's 47th Regiment of Foot, and of Mrs. Mary Winslow, whose memoirs have obtained for her considerable celebrity in the religious world, was born in London, 1810. He was a lineal descendant of the famous Edward Winslow, first Governor of New Plymouth, one of the leaders of the Pilgrim Fathers, who left England in the “Mayflower” in 1620. During the War of Independence, the Winslows were ardent Royalists, and at the termination of the war all the extensive family estates at Boston were confiscated, and Dr. Winslow's family came to England. He was educated in Scotland, and commenced his professional education in New York, continuing the study of medicine, for which he early evinced a very strong predilection, at the University of London, where he was a pupil of Drs. Turner, Elliotson, and Quain, and also at Middlesex Hospital, where he had the advantage of being a pupil of Sir Charles Bell, whose brilliant researches into the mysteries of the nervous system were then causing a complete revolution in physiological science.

At the commencement of his career, owing to the straitened family circumstances, Dr. Forbes Winslow was met by obstacles which would have daunted a less ardent and ambitious mind; but with him difficulties were only made to be overcome, and his eager thirst for knowledge, his determination to make his mark in the world, and the consciousness of power within, carried him triumphantly through all his early struggles.

He would work all day at the hospital, and then, as reporter for the *Times*, go in the evening to the Gallery

in the House of Commons, so paying for the expenses of his own education.

This practice he carried on later in life. Of these early days an intimate friend has thus written :—“ Even after he had retired from general practice, had taken his degree in medicine, and removed to a private house in Guilford Street, Russell Square, he continued for some time to report for the *Times*. It was no uncommon thing for him to leave the *Times*’ office at seven or eight in the morning, take a hasty breakfast, and be ready to receive patients by ten o’clock. He managed to steal two or three hours of sleep in the course of the day, but was always ready, and apparently fresh, to take his turn in the Gallery when he was required. The labours, physical and mental, which he then underwent would have undermined a constitution less sturdy and healthy than his. But he was made of the right stuff for work, and possessed a cheerfulness of spirit, a helpfulness and self-reliance, which carried him through.”

Even while he was a student he began to show signs of his possession of the literary faculty; in 1831 he read a paper on the “ Application of the Principles of Phrenology to the treatment and cure of Insanity,” which he afterwards published as a pamphlet; then a manual of Osteology, a manual of Practical Midwifery, and the Student’s Pocket Guide to the College of Surgeons.

These manuals were written in his early days, with the view of defraying the expenses of his own education, his pen being then the only means he had; he obtained £50 for his first manual, and with this sum he paid his fees for lectures at the hospitals. He never alluded in his later days to the literary efforts of his earlier career, and the existence of these manuals were not even known to the members of his own family, who were professionally associated with him; in fact, Dr. Forbes Winslow was a self-made man, and made his way and name in the world by indomitable perseverance and talent. We remember his telling us that frequently, after having been engaged in the House reporting, and notwithstanding that he had been at his professional work at the hospital during the

day, he would, as soon as the House rose, steal off with a candle to the dissecting-room, and though worn out with the labours of the day, resume his anatomical studies. In 1835 he became a member of the Royal College of Surgeons, and shortly afterwards graduated as Doctor of Medicine at the University of Aberdeen, and was elected as Fellow of the Royal College of Physicians, Edinburgh, and subsequently as Member of the Royal College of Physicians, London, 1859.

In 1839 he produced his first considerable work “Physic and Physicians,” which subsequently passed through three editions ; an amusing book, brimful of anecdotes and curious information as to the early struggles, eccentricities, and careers of eminent medical men. In 1840 he brought out “The Anatomy of Suicide,” the first book ever written in England on the subject. In this work his object was to plead for the abolition of the verdict of *Felo-de-se* in cases of suicide. In every case of suicide he maintained that there was a perversion in a greater or smaller degree of the intellectual and moral faculties, the act of self-destruction itself being often the very first symptom of this perversion. “To punish suicide as a crime is to commit a solecism in legislation. The unfortunate individual by the very act of suicide places himself beyond the vengeance of the law ; he has anticipated its operation ; he has rendered himself amenable to the highest tribunal—viz. that of his Creator ; no penal enactments, however stringent, can affect him. It is unjust, inhuman, unnatural, and un-Christian, that the law should punish the innocent family of the man who, in a moment of frenzy, terminates his own miserable existence.” These views, which were somewhat novel at the time they were written, are now accepted by all right-thinking men, and the useless and cruel verdict of *Felo-de-se* is very seldom recorded.

About this period he published a book on “The Preservation of the Health of Body and Mind,” which received the very highest encomiums from the press, and was hailed as indicating the approach of a new era

in the history of medicine. In 1843 he produced a small work which went through three editions, and eventually caused a revolution in the procedure of our courts of law ; we refer to his “ Plea of Insanity in Criminal Cases,” of which we shall have more to say further on.

His success in life was now assured. To carry his theories into practice, in 1847 he founded two private asylums for the care and treatment of the insane, at Sussex and Brandenburgh Houses, Hammersmith. Here, perhaps, he went further than all his compeers, in the completeness with which he carried out his benevolent views. Kindness and gentleness were the two universal factors in his treatment. The *surveillance* to which his patients were submitted, while unremitting in the care of dangerous cases, was most unobtrusive ; concerts, dinner parties, balls, games of all kinds and varieties, were called in to play their part in his scheme. The life of the asylums was essentially a home life, the good doctor and his family living in the midst of his patients, who became for the time being members of his family circle. Those who manifested signs of improvement were allowed to go out of the gates on parole, and this parole was most honourably observed. This treatment, combined with skilful therapeutic remedies, produced in many cases very marked results, and during the latter part of his life Dr. Winslow was continually receiving most pleasing tributes of affection from grateful patients, to whom he had restored the light of reason. In 1848 he founded the “ Quarterly Journal of Psychological Medicine,” which enjoyed a high reputation and large circulation. It was remarkable not only for its profound scientific thought, but also for its wide range of subjects. This journal continued in existence for sixteen years, and bears in its pages ample proof of the literary capacity and singular ability of its editor.

His next productions were a “ Synopsis of the Law of Lunacy, the Lunacy Act, with Notes,” “ Softening of the Brain from Anxiety,” &c.

In 1851 he was elected President of the Medical

Society of London, and on the establishment of the Juridical Society, he was elected Vice-President, and read before its members an elaborate paper on “The Legal Doctrine of Responsibility in cases of Insanity connected with alleged Criminal Acts,” and at the late Lord Derby’s installation as Chancellor of the University of Oxford he had the very high honour of having conferred upon him the honorary degree of D.C.L. He was selected by the Medical Society as the Lettsomian Professor of Medicine for 1851–52, when he delivered three lectures, subsequently published, 1, on the Psychological Vocation of the Physician; 2, on the Medical Treatment of Insanity; 3, on Medico-Legal Evidence in cases of Insanity.

The year 1860 saw the issue of his great work, called by one of the Quarterlies “the master effort of a great philosopher,” his fascinating book “On the Obscure Diseases of the Brain and Mind,” intended as a preliminary volume to a larger and more comprehensive work, “On the Softening of the Brain,” unhappily not completed at his death. This production passed rapidly through four editions, and is to this day the text-book on the subject of which it treats. From the pureness of its style, the clearness as well as depth of its thoughts, and the ability with which the reader is carried with unabated interest from beginning to end of the volume, this work may fairly be considered as one of the classics of the English language. We have space but for one beautiful and suggestive passage:—

“The physician should entertain right notions of his duty and position, and encourage elevated, lofty thoughts and grand conceptions of his honourable vocation. He should impress repeatedly, earnestly, and solemnly upon his own, as well as upon the minds of all engaged in the same holy work, the fact that they are conjointly occupied in the study and treatment of a class of diseases affecting the very source, spring, and fountain of that principle which in its healthy operation alone can bring man into remote proximity to Deity; that the physician has to deal with the spiritual part of

his complex nature, with that which elevates him in the scale of created excellence, and places him high on the pedestal among the great, the good, and the wise. But his functions expand in interest, gravity, grandeur, and importance as he reflects that it is Human Mind prostrated, perverted, and often crushed by disease with which he has to deal; that he has placed under his care a class of the afflicted human family, reduced by the inscrutable decrees of Providence to the most humiliating and helpless position to which a rational being can fall; that it is his duty to witness the melancholy wreck of great and noble minds, and to sigh over the decay of exalted genius.

“Like the historian and antiquarian wandering with a sad heart over ground made classical and memorable in the story of great men, and in the annals of heroic deeds, surveying with painful interest the ruins of ancient temples, viewing with vivid emotion the almost extinguished remains of proud imperial cities, consecrated by the genius of men renowned in the world’s history as statesmen, scholars, artists, philosophers, and poets, so it is the duty of the mental physician to wander through the ruins of still greater temples than any raised in ancient days to the honour of imaginary DEITIES. It is his distressing province to witness great and good intellects, proud and elevated understandings, levelled to the earth, and there crumbling like dust in the balance, under the influence of disease.

“Survey that old man crouched in the corner of the room, with his face buried in his hands. He is indifferent to all that is passing around him; he heeds not the voice of man nor woman; he delights not in the carolling of birds nor in the sweet music of the rippling brooks. The gentle wind of heaven, playing its sweetest melody as it rushes through the greenwood, awakens in his mind no consciousness of nature’s charms. Speak to him in terms of endearment and affection; bring before him the glowing and impassioned images of the past. He elevates himself, gazes listlessly and

mechanically at you, ‘makes no sign,’ and, dropping his poor head, buries it in his bosom, and sinks into his former state of moody, melancholy abstraction. This man’s oratory charmed the senate; the magic of his eloquence held thousands in a state of breathless admiration; his influence was commanding, his sagacity eminently acute, and his judgment profound. View him as he is fallen from his high and honourable estate.

“Listen to the sweet and gentle voice of yonder woman, upon whose head scarcely eighteen summer suns have shed their genial warmth and influence. How merrily she dances over the greensward! How touchingly she warbles, like Ophelia, in her delirium, snatches of song! What a pitiful spectacle of a sweet mind lying in beautiful fragments before us! Look! she has decked herself with a spring garland. Now she holds herself perfectly erect, and walks with queenly majesty. Approach and accost her; she exclaims, ‘Yes, he will come; he promised to be here; where are the guests? where is the ring? where is my wedding dress—my orange blossoms?’ Suddenly her mind is overshadowed, and her face assumes an expression of deep, choking, and bitter anguish—she alternately sobs and laughs, is gay and sad, cheerful and melancholy—

Thought and affliction, passion, hell itself,
She turns to favour and to prettiness.

“Speak again to her, and another change takes place in the spirit of her dream. Like her sad prototype, the sweetest creation of Shakspeare’s immortal genius, she plaintively sings—

He is dead and gone, lady,
He is dead and gone;
At his head a green grass turf,
At his heels a stone!

“Her history is soon told. Deep and absorbing passion, elevated hopes, bright, sunny, and fanciful dreams of the future—DEATH with all its factitious

trappings, sad and solemn mockery of woe—seared affections, a broken heart, and a disordered brain !”

In 1856 Dr. Winslow was elected President of the Psychological Association.

In 1865 Dr. Winslow had a serious illness which brought him to the verge of the grave, and confined him for a year to his bed, and during convalescence he wrote, more for amusement than anything else, a pleasant, chatty book, on “Light and its Influence;” he likewise issued a pamphlet on “Uncontrollable Drunkenness, Considered as a Form of Mental Disorder,” which created great interest, and opened a new sphere of usefulness; and in 1872 he was examined as a special witness before a Select Committee of the House of Commons, appointed to enquire into the general management of drunkards. Besides these literary labours he was a constant contributor to the medical and daily papers, working readily with his pen, in the midst of the greatest noise and distraction, having a singular power of immediate concentration of thought.

We should fail to do justice to his memory did we not dwell especially upon that which we may call the grand achievement of his life—the establishment of the plea of insanity in criminal cases.

At the trial of McNaughten for the murder of Mr. Drummond, Dr. Winslow, who was in Court, and who had not been summoned on either side, was asked by the judge to enter the witness-box; and after he had given his evidence in favour of the insanity of the luckless murderer, Lord Chief Justice Tindal interposed and stopped the case, as his evidence, combined with that of a previous witness, Mr. Aston Key, proved beyond all doubt the insanity of the murderer. From that time Dr. Winslow has been constantly summoned as a medical jurist in cases of doubtful insanity, and has been instrumental in saving many a poor irrational lunatic from the last terrors of the law. The opposition which he had to encounter before he could get this plea of insanity established is well nigh incredible, save to those who know how conservative our lawyers are,

and how jealous they manifest themselves of any intrusion on their prerogatives, and also how unthinking and unreasonable, for the most part, public opinion is when its feelings are strongly excited. On this matter we will let the doctor speak for himself:—

“ A man commits a murder. He is tried for the crime. The plea of insanity is raised in his defence, upon what is conceived to be sound evidence, of the existence of mental derangement at the time of the murder. The attempt thus made to protect the criminal immediately rouses public indignation. Such an excuse is not in many instances listened to, and the unfortunate medical witnesses who have been called upon to exercise an important, and often thankless duty, in support of the plea, are exposed, for giving an honest expression of opinion, to the most unmeasured ridicule and vituperation. In defending the memory of the suicide from the disgrace that would accompany a verdict of *Felo-de-se*, the evidence of the medical man proving insanity is regarded with great respect, and treated with profound deference ; but in his effort to save a lunatic from the agonies of a painful death upon the scaffold, on evidence much stronger than was adduced before the previously mentioned Court, the expert is exposed to unmitigated abuse. Instead of being considered as an angel of mercy engaged in the exercise of a holy and righteous mission, he is viewed with suspicion, and often treated with contumely, as if he were attempting to *sacrifice* instead of to *save* human life. Again, the attempt to prove sanity and mental capacity at a Commission of Lunacy, with the object of preserving intact the liberty of the subject, and establishing his right to an unfettered management of his property, is applauded to the very echo; but any endeavour to excuse, on the plea of insanity, the crime of some unhappy wretch alleged to be an irresponsible lunatic, in order to rescue him from penal servitude, or from the hands of the executioner, is denounced, in unqualified language, as a most monstrous, unjustifiable, and iniquitous interference with the course of justice. The

excuse of insanity will not, in many cases, under these circumstances, be tolerated by a portion of the press. The public mind is violently shocked at the commission of a horrible and brutal murder. The act is viewed as one of great and barbarous atrocity, apart altogether from its concomitant extenuating medico-psychological considerations. The cry is raised for ‘vengeance!’ The shout is, ‘an eye for an eye!’ ‘a tooth for a tooth!’ ‘blood for blood!’ forgetting in the paroxysm of indignant emotion and frenzy of excited feeling engendered by the contemplation of a dreadful violation of the majesty of the law, that *justice* must be tempered with that *Divine mercy* which sanctifies and enshrines

The thronèd monarch better than his crown.

And is the attribute of God Himself.”

These words were written *ex animo pleno*, and are evidently dictated by sad experience. However, Dr. Forbes Winslow had the satisfaction before his death of seeing his views generally accepted, and the plea for which he had so valiantly striven now passes unchallenged in our courts of law. Other physicians have since written on the same subject, but *palmas qui meruit ferat*; and we repeat, it is to Dr. Forbes Winslow that the honour of first establishing the plea in England is due. We may mention the following memorable cases, in which Dr. Winslow was engaged as a medical expert:—In the trial of Atkinson, who murdered his sweetheart; in the case of Mrs. Brough, the wet-nurse of the Prince of Wales, who murdered her six children; of Weston, who shot Mr. Waugh, the Solicitor of Bedford Row; of Mrs. Vyse, who murdered her children. He made an ineffectual attempt to save Buranelli, the Italian, who was undoubtedly mad. The two cases of young Windham and George Victor Townley, in which he asserted the existence of insanity, in opposition to excited popular feeling, and almost the entire public press, proved by their final issue the correctness of his judgment; Windham, by his painful end, proving to us his utter inability to take charge of himself

or his property, and Townley terminating his existence by suicide in his prison.

Besides these more notable cases he was often called into consultation by the prison authorities as to the insanity, feigned or otherwise, of the prisoners under their charge. He was also largely consulted in cases of legal dispute involving questions of mental capacity; and many points of extreme delicacy involving large and important interests were submitted to his unerring tact and judgment.

So much for his professional and public life; of his generosity and kindness to needy members of the profession and to those around him, of his geniality and brightness, and the deep religious principles which enabled him to administer to the souls as well as the minds and bodies of his patients, it is not our desire to speak—these are written, we trust, in the records of another Book. He never recovered the great shock which he received some nine years before his death, and although he rallied in a certain measure, he gradually became more and more incapable of very active exertion, keeping possession, however, of his clear faculties and cheerfulness even to the very last. In March 1874, at Brighton, he succumbed to Bright's Disease, having earned for himself an imperishable memorial in the love and gratitude of his countrymen, having acted up to the spirit of those memorable words with which he concludes his great work:—"The spirit of love, tender sympathy, Christian benevolence, unwearying kindness, and warm affection, should influence every thought, look, and action of those engaged in the responsible treatment of the insane. It is the special province of the psychological physician to

Fetter strong madness in a silken thread,
Charm ache with air, and agony with words.

What a holy, honourable, and sacred occupation is that in which he has the privilege of being engaged! Angelic spirits might well envy him the ennobling and exalted pleasures incidental to his mission of benevolence and love."

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ART. I.—MATERIALISM.

BY J. M. WINN, M.D.

Formerly Resident Physician of Sussex House Lunatic Asylum.

Now that the storm of indignation which was excited by Dr. Tyndall's Address, delivered before the British Association at Belfast in August last, has somewhat subsided, the proper time has arrived for taking a calm and dispassionate view of the materialistic doctrines, which the Professor so loudly though eloquently espoused; and for testing their value with regard to biological and mental science. Had it not been for the bright glitter of the Professor's eloquence, it is questionable whether his vehement advocacy of Materialism would have attracted so much attention. His remarks are not original, and he must only be considered, if we rightly apprehend his meaning, as the supporter of the views of Democritus, Lucretius, Darwin, Huxley, Herbert Spencer, *et hoc genus omne*; nevertheless, as six thousand copies of his printed Address were published in less than two months after its delivery, it shows how attractive the style of the Doctor's writing must be; and it is but just that his arguments, which may be considered those of scientific materialists in general, should receive a careful and candid criticism.

In my remarks I shall chiefly follow the text of the Professor's Address as it was delivered and reported in the *Times*; for the reprint which was subsequently published, in which there are both omissions and additions, greatly qualify the original meaning.

It is no excuse for the imperfections of the Address that it was written, as he states, in Switzerland, under some disad-

vantages. The President of the British Association is placed in a most responsible position, and is looked up to as a high authority on scientific questions. He should adhere strictly to facts, and not indulge in wild speculations on the origin of life and mind.

Professor Tyndall opens his Address with a sketch of the atomic philosophy, as propounded by Democritus and his successors. Their speculations, though extremely interesting, are so well known as to require little comment, except in so far as they prove that the atomic theory, which he preaches as zealously as if it were a new religion, is more than two thousand years old. His admiration for, and faith in, Lucretius are unbounded. He remarks, with evident satisfaction, Lucretius' notions that the mechanical shock of atoms is the all-sufficient cause of things, and that the constitution of nature has not been "in any way determined by intelligent design"; and he quotes the following atheistical passage from the poet's writings: "If you will apprehend and keep in mind these things, nature, free at once, and rid of her haughty lords, *is seen to do all things spontaneously of herself, without the meddling of the gods.*" After this, no wonder that Plato and Aristotle are dismissed with scant praise.

In enquiring into the causes which checked the advance of science during the many centuries that passed unmarked by any philosophic discovery, after the days of Pythagoras, Hipparchus, and Ptolemy, the Professor mentions the various causes assigned by other writers, and then proceeds to speak with very bad taste of the introduction of Christianity as one of the stumbling-blocks in the path of progress, though he pays a great and glowing tribute to the heroic fortitude and pure lives of the early Christians. How could he do otherwise? He evidently considers that the benefits conferred by Christianity are to be reckoned as of small importance if science be at stake. I cannot be surprised at this, when I see by a note in the reprint that one of his great authorities is the infidel Renan.

It is painful to notice throughout the Address the tendency to place religion in antagonism to science, as if we were living in the days of the Inquisition, and it was necessary for Dr. Tyndall to come forward as the champion of free-thought. Never has there been a time of such entire civil and religious liberty as now, when even the atheist Bradlaugh can spout his blasphemy in Hyde Park or Trafalgar Square without the slightest hindrance; surely this ought to satisfy the Professor. In the present century some of our best scientific workers have been members of the clerical profession. Few names among geologists are more distinguished than that of the Rev. W.

D. Conybeare, the discoverer of the Plesiosaurus, or that of the Rev. Mr. White, of Selborne, as a naturalist; and it happens somewhat curiously at this present time, as if to refute Dr. Tyndall, that two of the observers appointed to watch the transit of Venus were the Rev. Father Perry, Astronomer of Stonyhurst College, and the Rev. W. Sidgreaves, also of Stonyhurst, both members of the Roman Catholic Church, which has been generally looked upon as the most intolerant of religions. Carried away by this hostile spirit, he seems determined to deprive the poor disbeliever in the almighty atom, of every crumb of comfort, for, when speaking of Newton, he says: "When the human mind has achieved greatness, and given evidence of extraordinary power in any domain, there is a tendency to credit it with similar power in all other domains. Thus theologians have found comfort in the thought that Newton dealt with the question of revelation forgetful of the fact that the very devotion of his powers through all the best years of his life to a totally different class of ideas, not to speak of any natural disqualification, tended to render him less, instead of more, competent to deal with theological and historical questions." I do not agree in this estimate of Newton. He was endowed with such high reasoning powers, to which his imagination was always under subjection, that he could hardly fail to make a sound deduction from any description of facts that were fairly set before him. He was not only well able from his intellectual capacity to comprehend religious truth, but was especially so, from the fact of his having devoted much time and attention to theological subjects, as is proved by his work on the Prophecies, and his letters on the existence of a Deity, written at the request of Dr. Bentley. A man is disqualified for giving a correct opinion on any particular subject by one or other of two causes, either by natural inaptitude, or from his mind being warped by too exclusive attention to some special study. Now we think that both these causes apply with especial force to the Professor himself. In him the imagination prevails over the reasoning power, and he is more given to flights of fancy than to patient and calm reflection; and, moreover, his mind is evidently biased by the fact that his studies have been chiefly directed to the elucidation of the phenomena of heat, light, radiation, and magnetism. It would have been more prudent if he had adhered to those subjects of which he had been so distinguished an expositor, and refrained from trespassing on the fields of psychology and medicine. When he attempted to write on fever germs, he forgot the old adage, *Ne sutor ultra crepidam*. But there was a moral grandeur about Newton which peculiarly fitted him for the per-

ception and reception of ethical and religious truth. Although he was the greatest natural philosopher that ever lived, there was in him none of that conceit or intellectual pride so conspicuous in the writings of many of the physiologists and philosophers of the present day. To him the proverbial saying, "Science puffeth up," does not apply; for his modesty was so great that it has been reported of him that he compared himself to a child gathering pebbles on the sea-shore, and occasionally picking up one brighter than those found by his companions.

The arrogance of some of these modern philosophers is glaringly displayed in an anonymous article which appeared in a leading periodical, from which the following extract is taken :—"Among the legitimate solaces of the toils of the modern biologist, there should certainly be reckoned the grim delight, which he were less than human if he did not feel, in terrifying Mrs. Grundy. Merely to hear a Huxley or a Spencer shout 'Boh' to a flock of the terrified orthodox is amusing; but to the man himself who makes it, the fun must be even perilously fascinating." If the writer of this article, so conspicuous for its choice English and gentlemanly tone, has seen Dr. Tyndall's Address, the Professor's attack on religion must have caused him "grim delight" indeed. In reply to the covert insult, we have only to observe, that although the Archbishop of Canterbury and other timid divines have admitted the possibility that the evolution theory may be true, there is a host of muscular Christians and red-cross knights, both in and out of the Established Church, ready to do battle with Huxley or Spencer or any other champion of the evolution cause. Dr. Watts, of Belfast, has recently given their advocate, Dr. Tyndall, some staggering blows, in his able and eloquent pamphlet on "Atomism." Dr. Ellicott, Bishop of Bristol and Gloucester, a man whose zeal, learning, and calm defence of religious truth has won the respect of all parties, has boldly come forward to meet the attack. In an article on Christian Evidences, in the last January number of the *Sunday at Home*, he makes the following valuable remarks:—"We have neglected and even discouraged the study of evidences: we have trusted entirely to the inward testimony, and to subjective persuasions, and we now find ourselves face to face with ably urged arguments and startling facts, and a conflict forced upon us which it is worse than disloyal to decline. Before us, able and confident opponents, calmly watching each hurried surrender of some hitherto assumed truth; around us and behind us, either a cold orthodoxy that declines to enter into controversy with sceptics, or a timid and conventional religion, that has not the faith or the courage to examine its true position, to test the real nature of its

defences, and to prepare firmly and charitably to take part in the inevitable encounter."

In referring to the scientific discoveries and remarked intellectual activity of the Arabs during the Middle Ages, and the intrusion of the Moors into Spain, the Professor seizes the opportunity, as is his wont, in the opening part of his Address, to sneer at Christianity; and remarking on the superstition of the Spanish peasantry, he forgets that in the most civilised countries of the nineteenth century there are still ignorant classes of the community who think it an interference with Providence to make use of vaccination, or to call in the aid of a medical man during illness. He observes: "When smitten with disease, the Christian peasant resorted to a shrine, the Moorish one to an instructed physician." Be this as it may, the Moors, with all their science, were not an unmixed benefit to Spain, and their expulsion in the fifteenth century, and the advantages which accrued therefrom, are thus spoken of by Hume, an author for whom Dr. Tyndall professes great admiration, and who has no Christian proclivities: "Spain, which had hitherto been almost entirely occupied within herself, now became formidable by the union of Arragon and Castile, in the persons of Ferdinand and Isabella, who, being princes of great capacity, employed their force in enterprises the most advantageous to their combined monarchy. The conquest of Granada from the Moors was then undertaken and brought near to a happy conclusion. And in that expedition the military genius of Spain was revived: honour and security were attained, and her princes, no longer kept in awe by a domestic enemy so dangerous, began to enter into all the transactions of Europe, and make a great figure in every war and negotiation."* It was at this time, too, and under the generous patronage of Isabella, that Columbus discovered a New World. If the power of the Moors had continued triumphant in Spain, would it have done more for civilisation and scientific progress than Christianity did, even overrun as it was at that time by error and superstition?

I would not for a moment underrate the benefit that science has conferred on mankind. By her mastery over the powers of nature she has established the means of communication between the most distant regions of the earth; has brought the productions of other countries to enrich our own, and carried the light of Christianity nearly over the whole world. Nevertheless, it is questionable whether science has ever done as much to ennoble mankind as art and literature, in both of which pursuits Spain shone conspicuously in her palmy days.

After a short sketch of the well-known discoveries of Coper-

* Hume's *History of England*, chap. xxv.

nicus and Giordano Bruno, Dr. Tyndall refers with great admiration to the materialistic views of the latter philosopher, who, he says, "Struck with the problem of the generation and maintenance of organisms, and duly pondering it, came to the conclusion that nature in her productions does not imitate the technic of man. Her process is one of unravelling and unfolding." . . . "Matter is not the mere naked empty *capacity* which philosophers have pictured her to be, but the universal mother who brings forth all things as the fruit of her own womb." These theories unmistakably exclude the idea of a Creator and superintending Providence, and differ little, if at all, from downright atheism. It is therefore unfair for Darwin and Dr. Tyndall, when they find that they have shocked the public feeling, to say that they do believe in a God (after their own fashion). It is by the help of such an empty protest that many of their admirers, who have not time or opportunity to examine their arguments closely, are led to adopt and believe in doctrines which cannot be proved by the inductive process of reasoning. It is curious and lamentable to see how Dr. Tyndall, with this bigoted belief in molecular power, seizes with avidity on any speculative remark which may have fallen from the pen of some eminent man that may confirm his own opinion, whether in accordance or not with the general teaching of the writer. In this way he lays hold of some remarks of Descartes on the phenomena of life, as if a consummate *mathematician* must necessarily be an authority on *physiology*. He speaks of him "as the first to reduce, in a manner eminently capable of bearing the test of mental presentation, vital phenomena to purely mechanical principles." In the same admiring spirit he mentions Gassendi, who was both a divine and a natural philosopher, a strong supporter of the molecular hypothesis, and one who Dr. Tyndall says contrived to outstrip Darwin. It seems, after a careful comparison of the doctrines of the atomic philosophers, that they may be divided into two classes—those who believe that the magic atoms were created, and those who must necessarily be driven to believe that they created themselves.

The Professor, in referring to various eminent writers who have held the atomic doctrine, in whole or part, mentions the names of Newton and Dalton as if they had embraced the same extravagant theory, whereas Newton's grand mathematical law simply implied "that every particle of matter is attracted by, or gravitates to, every other particle of matter, with a force inversely proportionate to the square of the distance"; and Dalton's atomic theory was also of a totally different character, and had reference to the chemical law of multiple proportions. But even this ingenious hypothesis, which has been so valuable

to the science of chemistry, has, nevertheless, its discrepancies; for, as the late Professor Fownes remarks*: "It is indispensable to draw the broadest possible line of distinction between this, which is at the best but a graceful, ingenious, and, in its place, useful hypothesis, and those great general laws of chemical action which are the pure and unmixed result of *inductive research*."

Unfortunately for the Professor, he has placed the arguments of his great teacher, the atheist Lucretius, in juxtaposition with those of the giant Bishop Butler. The reasonings of Lucretius, which he puts in the mouth of a supposed disciple, are the well-known arguments of the materialistic school, viz. that a mental picture of "living powers," "percipients or perceiving powers" of "ourselves," cannot be formed "apart from the organisms through which it is supposed to act"; that consciousness is not a necessary element of the true self, because the body may be deprived of consciousness during life by any accident affecting the brain; and, in that case, "Where is the man himself during the period of insensibility?" that brain disease will produce a thorough change of character, converting a moral man into a debauchee, thereby showing that the so-called immortal reason is nothing more than a healthy condition of the brain.

In reply, Dr. Tyndall gives what he imagines would be the bishop's answers, which I will abbreviate. The bishop is supposed to say: "I do not profess to prove anything absolutely, and I have over and over again insisted on the smallness of our knowledge, or rather on the depth of our ignorance, as regards the whole system of the universe." . . . "I admit that you can build crystalline forms out of the play of molecular force." . . . "I will go further, and acknowledge that even a tree or flower might in this way be organised."† . . . "Your atoms are individually without sensation, much more are they without intelligence. May I ask you, then, to try your hand upon this problem? Take your dead hydrogen atoms, your dead oxygen atoms, your dead carbon atoms, your dead phosphorous atoms, and all the other atoms, dead as grains of shot, of which the brain is formed. Imagine them separate and sensationless; observe them running together and forming all imaginable combinations. This is a pure mechanical process, is *seeable* by the mind. But, can you see or dream, or in any way imagine how, out of that mechanical act, and from these individually dead atoms, sensation, thought, or emotion are to arise? I can

* *A Manual of Chemistry*. Fifth Edition. Revised by H. Benco Jones and A. W. Hofman.

† We cannot believe that the bishop would ever have acknowledged that inorganic matter could of itself make a living plant.

visualise the waves of ether as they cross the eye and hit the retina—and pursue to the central organ the motion thus imparted at the periphery, and see in idea the molecules of the brain thrown into tremors, but the notion baffles me that from these physical tremors things so utterly incongruous with them as sensation, thought, and emotion, can be derived.”
 “You cannot satisfy the human understanding in its demand for logical continuity between molecular processes and the phenomena of consciousness.” This fanciful sketch of what Dr. Tyndall believes to be Bishop Butler’s opinions on the question of materialism, is concluded (in the *reprint* of his Address, not as it was delivered) by the following remarkable and inconsistent admission: “*I hold the bishop’s views to be unanswerable!*” Far better would it have been for the Professor’s reputation if he had calmly reflected on the above arguments before he appeared on the platform of the British Association at Belfast, and if he had then confessed the belief which he has put into the mouth of Bishop Butler, and which has been held by some of our profoundest thinkers—that it is inconceivable that matter should think.

After enumerating all the writers whom he considers favourable to his theory, from the earliest period downwards, he comes to what he looks upon as the crowning-point of all philosophy and knowledge, Mr. Darwin’s hypothesis of evolution, which he seems to regard as the greatest discovery ever made by man, forgetting that it is not an immutable law, but only an unverified theory. It is amusing to find him speaking of it as coming slowly to birth, like the law of gravitation which Newton pondered over for twenty years. In like manner, he says, Darwin reflected on his idea for twenty-two years. He admits that Lamarck had previously shadowed it forth, and that his views on “the development of species out of changes of habit and external condition” were fully set before the public by the author of “*Vestiges of Creation*.” I can remember when that book appeared, and the furor it occasioned, an excitement equal to that caused by Darwin’s “*Descent of Man*.” But it was a nine days’ wonder, and would have sunk into utter oblivion had it not been revived by the publication of Darwin’s work. The sharpest criticism on the “*Vestiges of Creation*” was one I heard shortly after the time of its appearance. A well-known geologist, speaking of the book to a distinguished astronomer, said, “That’s a very clever book, but the author knows very little about geology.” The other replied, “I, too, thought it very clever, but the author is ignorant of astronomy.”

Neither Tyndall nor any other enthusiastic supporter of Darwinism can believe that it is capable of being proved by induction. The difficulties to be contended with in its present

phase are, in truth, insurmountable. The chief argument in its favour, that on which so much stress is laid, is nothing more than a common fact, well known to all breeders of animals and to every common gardener—that an endless variety of animals and plants can be produced by careful selection, crossing, &c. No one, however, has succeeded in producing a new genus, or a decidedly new species. Can Darwin give a wiser reason for the barrenness of mules than the one commonly received, that the Deity has willed that there should be no confusion of species? If the facts are pressed on the evolutionist, that the forms and features of men and animals are the same now as they were thousands of years ago, as depicted on the Egyptian monuments, or as still traceable in the mummies of the pyramids, and that the intellect of man has never been developed in a higher degree than it was in the days of the Hebrew prophets and Greek poets, the stereotyped answer is, that evolution requires not only thousands, but billions upon billions of years for the development of a new species. This is dreaming, not sober reasoning, and is best suited for a poem, or a novel like Bulwer Lytton's clever "Coming Race." The palæontologist can read the records of the past stamped on the crust of the earth, but who can read the future of a million years to come? The mind of man has not only a limited field of observation, but has also limits to its own power, and it is not a healthy exercise for the mind to indulge over much in the pleasures of the imagination. So far, however, as we can judge from observation of the past, we see but little prospect of ever bridging over the gulf which separates man from the brute creation.

No one can refrain from admiring the genuine and hearty enthusiasm with which Dr. Tyndall regards Darwin, in whom he sees nothing but perfection, and of whom he speaks as if he were the greatest philosopher that ever lived; but there are many as delighted as he is with Darwin's fascinating descriptions of animal and vegetable life, yet not so blinded by their zeal as to believe in the unlimited application of the law of natural selection. Dr. Tyndall quotes the habits of different species of bees as proofs of the truth of this law, and as showing that the skill of the hive-bee has been developed by evolution step by step through inferior classes of bees. There are high authorities, however, who think that the marvellous ingenuity of the hive-bee was conferred directly, not indirectly, by the hand of the Creator.

It would be an endless task to discuss all the difficulties that beset the theory of evolution. It is impossible for Darwin to answer the questions that are incessantly cropping up, such as—Through what channel does the nightingale derive her song? Are the wings of birds derived from the quills of the

porcupine? Whence did the beaver gain his constructive power? How did the spider learn to spin her geometric web? or the carrier pigeon acquire her wonderful instinct? Is the beauty of flowers, which are the grace and ornament of the earth, due to natural selection? Questions like these might be asked *ad infinitum*, and in vain. All naturalists have observed the gradation of organisms, from the lowest forms of being up to that of man, on which Darwin and the materialistic physiologists lay so much stress, as well as the similarity of their bodily functions and conformations, showing the archetypal unity which is found throughout all nature; but this fact does not exclude the probability of each species or genus being a separate act of creation, which is the only solution of the difficulty.

One reason for Dr. Tyndall's sympathy with Darwin may possibly be (if the Professor is not mistaken in his opinion) that he does not believe in a Final Cause. These are Dr. Tyndall's words in reference to him: "It is the mind, thus stored with the choicest materials of the teleologist, that rejects teleology," seeking to refer the wonders of the animal and vegetable kingdom to natural causes. He styles this "the method of nature, not the 'technic' of a human artificer." Some evolutionists, who have a sort of belief in a First Cause, are perpetually accusing their opponents of anthropomorphism, exulting in the conviction that their own idea is more consistent with reason than the old-world belief in a Creator of all things. No one can seriously believe that the word Creator is intended to convey the notion of the "technic of man"; but it is our only mode of expressing our conception of the might and mystery of the Author of all things. How can man, with his finite faculties and limited language, speak of Infinite Power in other than finite words?

After discussing the evolution hypothesis, Professor Tyndall's materialistic views are given still more strongly when he comes to speak of the conservation of energy. He asserts that "vital as well as physical phenomena" are brought "under the dominion of the law of causal connection"; in other words, that vital and physical forces are identical. This is an assumption opposed to reason and experience. There is strong ground for believing that Grove's doctrine of the correlation of force applies to heat, electricity, chemical affinity, and motion; but there is no proof that it can be extended to vital phenomena. "Correlation of force" is a clear idea (and, as the late Professor Whewell taught, all discoveries are owing to sound metaphysical conceptions); not so clear the term "conservation of energy," which is not so explicit, but is now so frequently substituted for it. Grove's doctrine has been very loosely applied by many writers of the day in their endeavours to reconcile phenomena

which have nothing in common. Before a correlation of forces can be admitted, it is necessary, according to Mr. Justice Grove's explanation, to prove a mutual convertibility—a see-saw sort of action. Thus heat may mediate or immediately produce electricity, electricity may produce heat. With a total disregard of this clear statement, modern writers speak of the correlation (forgetting to add the word “force”) of leaves and roots, of mental and nerve force, of vital and physical force, &c. If we apply the test of Grove's theory to the consideration of vital phenomena, we shall not find that a single instance has been recorded in which vital and physical force have been found interchangeable. No physicist has yet been found able to produce bioplasm* out of inorganic matter; no physiologist has succeeded in discovering a positive proof of spontaneous generation; nor has any experimental philosopher resuscitated a corpse by means of galvanism. Until these improbable results have been obtained, we must withhold our belief in the molecular doctrines of the present day, however eloquently and ably they may be advocated. I confess that we can no more explain the nature of vital than of any other force; we know of its existence only by seeing its marvellous effects in the growth and reproduction of animal and vegetable organisms, and its power to resist those terribly destructive physical forces which come into play as soon as this mysterious power is withdrawn. This simple, common-sense notion of vitality is more intelligible than any of the molecular theories. If life is only the result of physical force, why is it that a man, *cæteris paribus*, does not live for ever, and why is the span of his existence limited to threescore years and ten? To say the least of it, the term vital force, which so many of the modern school of physiologists condemn, looking at it merely in a scientific point of view, serves conveniently to group together and generalise a large number of facts, which in our present state of knowledge cannot be explained by physical force.

Mr. Herbert Spencer, according to Dr. Tyndall, asserts that vital actions are almost as physical as those that lead to the coalescence of two globules of oil suspended in a mixture of alcohol and water, which do not unite until the pellicles that have formed around them burst. From similar combinations (he gives them the misnomer of organisms), mounting up, step by step, from one to another, he imagines that a living body is constructed. Had Dr. Tyndall and Mr. Herbert Spencer recog-

* I think Dr. Lionel Beale, in his work on *Disease Germs*, has given strong and convincing reasons for substituting the term bioplasm for protoplasm, to signify *germinal* or *living* matter, as the latter word has recently been used with such a wide significance as to call forth the sarcasm—attributed to Max Müller—“that protoplasm, after creating everything in the universe, finished by creating itself!”

nised the wonderful facts revealed by the microscope, which some physicists are apt to despise, they would have perceived that the oil globules, with their pellicles, are totally different from the germinating cells of which a living body is built up. These minute specks, as shown by the microscope, have the powers of absorption, motion, and proliferation, and are, in fact, true living germs. It is apparent that Dr. Tyndall and Mr. Herbert Spencer are unacquainted with the first elements of physiology.

The Professor calls Mr. Herbert Spencer "The Apostle of the Understanding." Does he think that what he says of life, which he defines as "a continuous adjustment of internal relations to external relations," has won for him that title? Can anything be more indefinite than such a definition?

Another theory of life is, that the vital structures are formed by a sort of crystallisation. A crystal as much resembles a life cell as an icicle does a warm, palpitating, living animal.

As regards the subject of instinct, the evolutionist believes that it is to be accounted for by hereditary transmission; that each animal is "not individually taught; its personal experience is nil, but has the benefit of ancestral experience. In that inherited organisation are registered all the powers which it displays at birth." In this manner the chick learns "the very complex co-ordination of eye, muscles, and beak," which enable it, on "coming out of the egg, to balance itself correctly, run about, pick up its food," &c. In all cases of this kind, the evolutionist holds that the instinctive powers displayed by animals are nothing more than the results of organic memory. The law of hereditary transmission cannot be disputed, but the evolutionist carries it to a fabulous length, and in the case of man he asserts that the human brain is a register of "infinitely numerous experiences *received during the evolution of that series of organisms through which the human organism has been reached.*" If this be true, how is it that man, the last evolved of all creatures, who must therefore have the largest share of ancestral experience, falls so far short of many of the lower animals in co-ordinating power soon after birth? How is it that genius is so seldom inherited and still more rarely transmitted? A writer in the *Quarterly Review* for July 1874, in an article on "Primitive Man," forcibly observes that "the intellect of Aristotle and Newton, the art of Raphael and Shakespeare and Mozart, have their claims to be no bestial developments," and that "their faculties are plainly seen to be different in kind from the complex entanglements of many animal instincts."

On the subject of time and space, Dr. Tyndall adopts Mr. Herbert Spencer's views, and in not very clear language

attempts to prove that time and space are not forms of intuition as Kant taught. His reasoning appears to amount to little more than that contained in his vague definition of life, to which reference has already been made; and is to the effect that "the constant external relations experienced by all organisms will have answering internal relations, and that we have such relations in those of space and time; and being the constant elements of thought, they become the automatic elements of thought." The late Professor Whewell, one of the profoundest thinkers of this century, makes the following remarks in his "Philosophy of the Inductive Sciences," which are opposed to Mr. Spencer's views: "Space and time are forms of perception and intuition, not abstract general conceptions derived from particular cases, but ideas to which we confine the impressions of sense; particular times and spaces are facts of infinite time and space."

In the face of such inconclusive arguments as Mr. Spencer's, it cannot but excite surprise that Dr. Tyndall should look on him with a sort of reverence, as if he were the impersonation of pure reason. Not satisfied, however, with according him this high honour, he is so strongly influenced by his own enthusiasm, that he cannot help, moreover, endowing him with a small amount of poetical feeling, and believes it possible that even in the serene atmosphere of his elevated position he may occasionally be overcome by the same weakness as ordinary mortals, and that his "ganglia are sometimes the seat of a nascent poetic thrill"!

Towards the close of the Address, the Professor becomes more decidedly materialistic, although in his reprint, and in his preface, he intersperses statements contradicting himself, from which it would seem that on subsequent reflection he was startled at the terribly dangerous lengths to which his visionary doctrines were leading him.

As to Mr. Darwin's "primordial form," he does not appear to have any clearer ideas on the point than Mr. Darwin himself. But Dr. Tyndall carries his views further back than to the starting-point of a "primordial form." He says: "Can we pause here? We break a magnet, and find the poles in each of its fragments. We continue the process of breaking, but, however small the parts, each carries with it, though enfeebled, the polarity of the whole; and when we can break no longer, we prolong the intellectual vision to the polar molecules. Are we not urged to do something similar in the case of life—to cross the boundary of experimental evidence, and discover in that matter which we, in our ignorance, . . . have hitherto covered with opprobrium the promise and potency of all terrestrial life?" Is this wild flight of fancy a specimen of

“the scientific use of the imagination”? We really know nothing about atoms, and the strangest notions have been entertained concerning them ever since the days of Democritus; he supposed them to be of various sizes; one philosopher thought they were invisible, and another that they had neither tops nor bottoms. This latter hypothesis is very unfavourable to Dr. Tyndall’s theory of molecular polarity.

After the numerous instances adduced of the Professor’s belief in the power of molecular force to produce all the phenomena of life, we unexpectedly find that he begins to discover, just as he is about to wind up his discourse, that “there are more things in heaven and earth than are dreamt of in his philosophy,” and he confesses that he cannot explain the connection between the nervous system and thought. He says, “We soar into a vacuum when we seek to comprehend the connection between them.” Not even Mr. Herbert Spencer can throw any light on this great mystery, and it baffles them both to account for the innate feelings of awe, wonder, and reverence, or for that religious sentiment, which Dr. Tyndall looks upon as a “form of force” which is dangerous if not limited to its proper sphere of emotion! The strongest contrast, however, to the materialistic opinions so conspicuously brought forward in the Address, as well as in Dr. Tyndall’s other published works, is exhibited in the following extract from the preface to the reprint of the Address, which appeared about a month after its delivery. “I have noticed during years of self-observation that it is not in hours of clearness and vigour that this doctrine [material atheism] commends itself to my mind; that in the presence of stronger and healthier thought it ever dissolves and disappears, as offering no solution of the mystery in which we dwell, and of which we form a part.” It is deeply to be deplored that Dr. Tyndall did not mention this fact when he delivered his address at Belfast, and promulgated doctrines which are calculated to undermine the faith of thousands, and which, if true, would shake the very foundations of all morality and religion.

I think I have now carefully examined all the arguments which Dr. Tyndall has brought forward in favour of materialism, and it must be admitted that he signally fails to verify his theory. By his own confession, he but half believes in it himself. The vagueness of his statement and his self-contradiction called forth a leading article in the *Times* of Saturday, the 24th of October 1874; and on the following Saturday Dr. Lionel Beale published a letter in the same journal, to press upon Dr. Tyndall that “his position as a public teacher, and the authority he wields as President of the British Asso-

ciation, render it imperative, not only that he should at once more accurately define the views he does entertain upon the momentous and far-reaching scientific question he has deliberately, so many times and in so many ways, forced into public notice, but that it is a duty he owes to science to state more clearly than he has yet done the inferences in favour of his doctrine." I believe that up to the present time Dr. Tyndall has not answered the questions, which Dr. Lionel Beale, from his position as a public teacher of physiology, and as one of the highest living authorities on histology, had a right to ask, and to which he might reasonably expect a reply. The natural inference to be drawn from his silence is, that Dr. Tyndall considers a prudent reticence to be the wisest course.

And now I will take my leave of Dr. Tyndall; but before concluding, it is desirable to make a few remarks on the dogmas and scientific jargon of the new materialistic school of physiology. The doctrines of this school have been gradually gaining ground, and are most conspicuous in the writings of the younger members of the medical profession. Slowly but surely they are spreading through all classes of the community, and especially exerting their baneful influence over the minds of the rising generation of medical students. Hardly a month passes but some young aspirant for fame contributes to the pages of the medical journals a *réchauffé* of the materialistic theories of life and mind which he has learnt at second hand, and thinks to gain thereby a little ephemeral notoriety.

The modern materialistic school has done incalculable mischief, morally as well as scientifically, not only by spreading widely the flimsiest hypotheses, as if they were established truths, but even the English language itself is getting corrupted by the new philosophical nomenclature that has been adopted in the endeavour to make the new theories intelligible. They will soon require to publish a glossary of the new terms which are accumulating fast. For instance, they call poetic emotion the thrill of a ganglion; thought, cerebration; life, molecular force; creation, evolution; the Deity, a primordial germ; crime, cerebral disease; &c.

The chief dogma of the new school is that mind and all its faculties—perception, memory, will, reason, imagination, as well as all moral attributes—are the result of bodily functions, as if they were secretions from the brain, like those of the liver or kidneys. They have various unintelligible modes of describing the phenomena of the mind. Its operations are spoken of by some as the product of the caudate cells of the brain—by others as a disturbance of the equilibrium of the nervous power—

as expressions of material changes in the brain—as an emanation from the body, &c. It seems strange that anyone can believe, or expect others to believe, that assertions like these, unverified by careful scientific inductions, can be substituted for what is commonly understood by the word “mind.” Mind is a fact, although it cannot be demonstrated mathematically; its existence is proved by our own consciousness, and its operations are indelibly inscribed on the literature and art of ages. We know its existence by its effects, and it would be as absurd to doubt it as to doubt that of a God, although we cannot explain the nature of either. That it is connected in a mysterious manner with our organisation no one can disbelieve, but we defy any modern physiologist to explain the connection. Even the materialistic Dr. Tyndall, as we remarked before, says “we soar into a vacuum” if we attempt to do so. The new school speaks confidently of their ingenious speculations as if they were facts, and as if recent researches had thrown a flood of light on the functions of the brain and spinal cord; but we should like to ask whether any one really great fact has been elicited since the discoveries of Sir Charles Bell and Marshall Hall. The nervous fibres of sensation and motion have been traced a little further towards the periphery of the brain, but we are as ignorant as ever of the precise functions of the caudate nerve cells of the cerebral convolutions; we can only surmise that it is through them that sensations are perceived and volition exercised.

Many of the so-called discoveries of the most painstaking cerebral physiologists are at variance with each other. Some assert positively that memory is intimately connected with the left frontal convolution of the brain; others as positively deny it. It had been for a long time believed that the optic thalami were closely connected with the upper extremities, as motor centres; I find, however, by an article in the *Lancet* (Jan. 23, 1875) that recent experiments on rabbits, by Nothangel, completely dislocate our ideas on the point, for he found that, after destroying the whole of the optic thalami, the rabbits were able to leap about. These facts show that physiologists should pause before asserting that the highest mental manifestations are only emanations from particular portions of the brain, when they have not yet been able to determine the centres of motion and sensation—questions which lie, as it were, on the threshold of the enquiry. Speculations on the modes in which the marvellous functions of the brain and nervous system are carried on are very valuable in their way, and the hypotheses of men of genius have sometimes led to important discoveries; but speculative reasoning should be confined to essays of a strictly suggestive character, not interspersed in a text-book

such as Dr. Carpenter's "Mental Physiology," which, as he states, has been written expressly for the "training and discipline of the mind." It is to be regretted that he has entitled his work "Mental Physiology," as it involves a contradiction; he might as well have called it "Metaphysics of the Body." But, at the same time that we allude to these defects, we bow with deference to his opinion on all matters connected with questions of pure physiology; it is only when he attempts to graft psychology on physiology that we are at issue with him. For instance, in his explanation of the manner in which vision is produced, he speaks of a correlation of mind force with nerve force, and of nerve force with the chemical change which produces light. If by correlation he means "correlation of force," which, as we have already observed, necessitates mutual convertibility, he must give an instance in which nerve force produces light; but this he has not done. We are, however, gratified to find that Dr. Carpenter does not believe that mind is altogether the result of physical forces, as is shown in the following extract from his recent writings. "In reducing the thinking man to the level of 'a puppet that moves according as his strings are pulled,' the materialistic philosopher places himself in complete antagonism to the positive conviction which, like that of the existence of an external world, is felt by every right-minded man who does not trouble himself by speculating upon the matter, *that he really does possess a self-determining power*, which can rise above all the promptings of suggestion, and can *within certain limits* mould external circumstances to its own requirements, instead of being completely subjugated by them." This and other admissions have roused the indignation of the biologists, and physiological psychologists, as they illogically call themselves. If they desire to be thought consistent, they should openly declare themselves materialistic physiologists. They differ from Dr. Carpenter in asserting that every faculty of the mind is the result of molecular force, to which they say the nerve cells are indebted for their existence. Since the publication of Professor Tyndall's Address, the materialistic physiologists have come out stronger than ever, as if his rhetoric had stimulated them to greater exertions. One writer lays it down, as if it were a geometrical axiom, that "thought is the product of the cells of the grey matter of the brain," and regards all who differ from him as the victims of a "domineering prejudice" !

The materialistic physiologists express their belief that the facts presented by the phenomena of insanity afford irrefragable proof of the correctness of their theory, that the mind is only a bodily organ. They point with an air of triumph to the

delirium and delusions of those cases of insanity in which brain disease has been discovered after death. They also refer to the benefits which often accrue from purely medical treatment. This beneficial effect they look on as the clearest evidence of the truth of their hypothesis, that mental affections are only diseases of the body. They speak of this as a modern discovery, whereas it was mentioned by Gassendi more than two hundred years ago. That the mind may be perturbed during insanity, as in the delirium of fever, from some bodily derangement, is undoubted; but it is questionable whether there is positive evidence of brain disease in all cases of acute mania, although degeneration of the brain tissue is sure to be the effect of insanity in chronic cases. It is a well-known fact that in uncomplicated cases of acute mania, where death ensues rapidly from exhaustion, a post-mortem examination detects little more than congestion of the bloodvessels of the brain and its membranes, some subarachnoid effusion, and sometimes opalescence of the arachnoid membrane, but this last appearance is not peculiar to insane cases; the substance of the brain, however, remains intact. Is it not to some kind of morbid force we must look for the cause of a sudden outburst of acute mania, rather than to mere congestion of the brain, which, if to any considerable amount, would be more likely to produce coma than frantic violence? Be this as it may, and even if it be admitted that insanity is one of the instances in which the body acts on the mind, cannot the psychologist point to innumerable examples of the mind acting on the body? How often in cases of nervous depression from mental anxiety has the bright influence of hope restored health, when all the drugs in the pharmacopœia had failed? And, again, on the other hand, will not a moral shock suddenly convert a healthy man into a raving lunatic? Of what use would medicine alone be in the treatment of the majority of cases of insanity, if it were unaccompanied by moral restraint? A favourite saying with the materialists is, that a man's happiness depends on a healthy state of his digestive organs; yet the converse is equally true, that a mental shock will immediately arrest the functions of the stomach. Shakspeare, who was no materialist, puts this well in Henry VIII. :

Read o'er this;
And after, this; and then to breakfast, with
What appetite you have.

It is to be regretted that Dr. Wilks, another zealous supporter of the materialistic physiology, in an article in the *Journal of Mental Science* for January 1875, gives his coun-

tenance to all the extravagancies of the physical theory of life and mind. This is the more to be deprecated because his position as a teacher of medicine in one of our largest metropolitan schools gives weight to his opinion on mental disease, whilst it is evident from his own observations that his experience in this branch of medical science is limited indeed. Before noticing his remarks which have especial reference to insanity, a few words must be said on some of the other points which he has treated of in his paper on "The Theory of the Mind from a Physiological Point of View." It is wearisome to hear the disciples of this school perpetually talking of this method of study, as if it were a *novum organum*, a new principle which is to clear up all difficulties relative to the working of the human mind. The same result was confidently anticipated from craniology, when Gall and Spurzheim first propounded that pseudo-science. How many believers are there in it now?

As a matter of course, like all this school, Dr. Wilks derives his inspirations chiefly from the theories of Darwin and Huxley, but he states that in the doctrine of unconscious cerebration "lies the very pith of his paper." He thinks this doctrine, which is still a vexed question among metaphysicians, will solve many mental and moral problems.

It may be incidentally mentioned that Dr. Wilks has some very singular notions on the subject of insanity; as he could not have derived them from a practical acquaintance with the subject, I can only conclude that he obtained them through the medium of unconscious cerebration, which is supposed to do a great deal of our thinking, without any trouble to ourselves, like the working of a steam-engine. He suggests "that it is the insane element which imparts what we call genius to the human race"; and as great wits to madness often are allied, I presume it is on that ground that he believes that it might be advantageous for a man to marry into a family predisposed to insanity, on the chance that one of his progeny might turn out a genius; but he might beget an idiot instead; for all medical men who have made careful enquiries into the family history of their insane patients must have found, even if they had not discovered the existence of insanity, that but few of the blood relations had escaped some hereditary taint. Strongly impressed with this fact, I published six years since a treatise "On the Nature and Treatment of Hereditary Disease," in which I offered a theory that has never been confuted, that all hereditary diseases are interchangeable.

The impressions which Dr. Wilks receives from a visit to an asylum are very peculiar, and different from those which are generally experienced. He says: "In going into an asylum"

. . . "I gaze on my fellow-creatures with awe, and not unfrequently with admiration. My feeling has sometimes been rather that of envy than pity, and I should have had no hesitation in parting, had it been possible, with part of one's own slow and prosaic nature for a portion of their confiding ecstasy." Dr. Wilks would have told a different tale had he resided for many years among the insane, and witnessed the misery of the poor lunatics who imagined their souls were lost; heard the blasphemy and obscenity of others; the distressing delusions of those who fancy that their best friends and nearest relatives are conspiring to ruin them; and learnt that the "confiding ecstasy" which so charmed him was probably the delirious exaltation of general paralysis. Had he observed this, and much more that it is needless to detail, his beautiful vision of insanity would soon have faded away. Dr. Wilks concludes his paper by expressing a conviction that what he calls the scientific mode of studying the mind—and this he confines to "the teachings of the *material* world"—will tend to make men more charitable and less self-seeking, and will promote "the leading Christian virtue of loving one another."

It is idle for writers of the above class to talk of anything approaching to religious tendency in their doctrine. If the views of the materialists be true, the inevitable result must be the destruction of all religious belief. If they do not absolutely ignore a Deity, the only conception they have of a Creator is, of a Power whose work was completed countless ages ago, and who has ceased to preside over His handiwork. This removes the Creator so far from us and our sympathies that He becomes a mere vanishing point in the dim vista of infinity.

Materialism cannot lead to the amelioration of mankind; the ideas of a ruling Providence and a future state being abandoned, brute strength, lying, cunning, and selfishness would be in the ascendant, patriotism would be a thing of the past, and all the horrors of communism would follow. Fortunately, from the constitution of human nature, it never has been nor can be generally believed, for it is not from the ranks of the materialist that we get a Philip Sidney, a Chevalier Bayard, a Lawrence, or a Havelock.

ART. II.—ON THE TREATMENT OF MELANCHOLIA, OR LYPEMANIA.

BY A. BRIERRE DE BOISMONT, de la Faculté de Paris, late Président de la Société Médico-Psychologique, &c.

THE description I have given of the symptoms of the species of insanity called Melancholia, in another work, would lead to the belief that this form of disease is not very amenable to cure. That is, however, the opinion of the general public, of many physicians, and even of those who are devoted to the treatment of the insane, as to all forms of insanity. Looking at the power of hereditary predisposition, its transmission from generation to generation, the degenerative processes it induces, and the numerous relapses it exhibits, one might almost be inclined to admit the truth of this painful prognosis. But when any one has treated a great number of insane cases for a long series of years, he has the certainty impressed on his mind that many of these cases return to society, very often exhibiting, indeed, traces of their malady, but still capable of fulfilling the duties of their professions, and even of leaving their families in a good position.

As for myself, I find that in respect to mania, melancholia, and partial insanity, I have noticed numerous cures, or, at least, long remissions which are exceedingly like them. I met lately, after an interval of more than forty years, a former inmate of an asylum, whom I considered likely to remain there all his life. He had, however, quitted it for many years, and had married; he had also acquired an honourable competency, and reasoned very sensibly in reference to his malady. Again, I had been very intimate with a poet, whose connection with all the celebrities of the day rendered his friendship very valuable, and who furnished me with some important hints for acquiring a knowledge of the human heart. He had been treated in a private asylum, at a period still more distant than in the last case, for a hypochondriacal affection, which made him think he was every instant at the point of death. I had never lost sight of him until his death, which recently occurred. His reason was completely restored; and to hear him conversing with that variety of tone, that brilliant display of imagery, that delicate irony, and that charm of speech, which are found only in Frenchmen who are true Parisians, no one would have believed that he had been confined as a lunatic. Being aware of his former malady, he had determined to remain in the asylum.

Many classes of insane patients may then recover, but in order to avoid exaggeration, it is necessary to study carefully the different elements of this fortunate result.

A certain number of melancholic cases recover once, twice, and thrice, some without having recourse to medical aid, and others by availing themselves of such assistance. Those who recover at home are especially those who preserve their sentiments of affection, and do not feel any estrangement from their family, and do not manifest any dangerous tendency. I attended a young lady who fell from time to time into a state of extreme despondency, used to burst into tears, deplored her destiny, and said that death was a hundred times preferable to such a fate as hers. She shut herself up in her room, was always silent, scarcely ate anything, and slept very little; but in spite of this array of symptoms she never wished, under any pretext, to leave the asylum, where she at last ended her days.

In most instances these patients, after several attacks which date from more or less distant periods, find their symptoms aggravated. The affections are perverted, and their relations and their homes inspire them with profound dislike. They are haunted by the most painful and terrifying insane ideas; they have hallucinations and illusions of the same kind; they have no desire for food, and they endeavour to destroy themselves. When they are taken in hand with these antecedents, some of them may still be cured. Most of them have long attacks, their faculties become altered more and more, and at last they become incurable.

At the commencement of the malady, when the family is in easy circumstances, and the patients are still able to understand their condition, recourse may be had to travelling, or to some intellectual, artistic, or physical employment; and not unfrequently success is achieved by the employment of these means, which are equally useful in the period of convalescence. But in the great majority of cases the serious nature of the symptoms necessitates the removal of the patients, afflicted with melancholia, to the asylums. I cannot overlook the facts that, out of 417 patients received in the space of 20 years—a period during which the observations were all made by myself, then intending to write a treatise the difficulties of which I fully recognised—80 of them refused their food, several of them died of exhaustion at the time of their arrival, 120 had continual apprehensions of death, 122 had made one or several attempts at self-destruction, and 7 succeeded in doing so in my establishment. It is truly necessary to have good sense and judgment to require, under such circumstances, before placing the patients in the asylum, a double or even triple medical certificate, an

examination before a magistrate or a member of the Committee of Inspection, or even an enquiry by a jury, especially when, after having been present at numerous sittings of the Committees of Inquisitorial Examination of the law of the 30th of June 1838, I have heard the members of the magistracy who were present declare that they had never known, in the exercise of their functions, of any case of arbitrary detention of a patient. Only one of these gentlemen had entertained some doubts in reference to a patient whom he had examined; but information, gained at the fountain head, enlightened him as well as myself as to the real nature of the mental disturbance and its cause. At the end of a terrible scene, the wife had revealed to the patient that she was the daughter of a convict, who had been exhibited and marked in a public square.

I shall now enter on the question of the treatment of melancholic lunatics, and shall prefer to rely on facts observed by myself, without making them subservient to any preconceived idea.

Among the therapeutic agents which I have employed in melancholia, prolonged baths, with or without irrigations, lasting from one to two, three, four, or five hours, have proved beneficial in my hands when the malady was recent, with agitation, want of sleep, heat of skin, and refusal of food. If the patients are apathetic, motionless, silent, dumb, presenting symptoms of stupidity, unwilling to take any food, attempting suicide, passing their motions under them—then the half-warm bath, with cold affusions by sprinkling (*en arrosoir*), or in the form of the shower or the douche, is often beneficial. A lady, who had been always of a serious turn of mind, having been exposed to some insulting proposals, was so strongly affected by the circumstance that a marked change was effected in her whole deportment. She remained motionless and as if terrified. Being placed in a half-warm bath, she had several affusions of cold water in the form of shower (*en pluie*), and on the eighteenth day she was cured.

Of the 198 patients who went out cured, namely, 163 completely restored to reason, and 35 with all the indications of recovery, the greater part received great benefit from the baths, the duration of which was in proportion to the effects produced. I took notes of seventeen cases cured by this mode of treatment. One of them recovered his reason the third day, having had no previous attack. Nine others, similarly circumstanced, were convalescent at the end of a fortnight. The seven others who also went out cured in the first month presented peculiarities which, at their admission, might have justified a certain amount of reserve, or even a doubtful prognosis on the part of the

physician. Thus, one presented symptoms of a melancholic affection which threatened a long duration; a second had alternations of improvement and relapse; a third, in progress of cure at the second bath, had been afflicted for years; a fourth, threatening to kill others and himself, afterwards admitted that he had been ill, but declared that he was so no longer. The behaviour of this last caused the most serious apprehensions of suicide, but after fourteen days' treatment a great improvement became apparent, and a visit from his relations materially accelerated his convalescence. A fifth patient, who had already been afflicted for five years, had relapsed, and had serious paroxysms which inspired fears for his life: he refused to take any food. The sixth, whose relatives evinced a predisposition to insanity, had suffered, a year before, from typhoid fever, followed by mental derangement; he threatened to kill his mother, was dissatisfied with everything, and excited apprehensions for his life. To my astonishment, after a very brief delay, a change for the better took place. Lastly, the seventh, born of a maniacal mother, was a sufferer from nostalgia, and had become profoundly indifferent and apathetic; her appearance was, from time to time, that of a person in ecstasy; her words were strange and her monologues interminable; she heard none of the words which were addressed to her; but all of a sudden she appeared to wake, as if from a dream, and became convalescent.

Facts such as these were alluded to by Dr. Brown at the annual meeting of American alienist physicians, held in 1870, at Hartford: and our lamented colleague Bell, being asked as to the question of prognosis in insanity, replied: "After having attended lunatic patients five years I thought I knew a great deal, but now that I have practised twenty years, I can affirm nothing certain scientifically." There is, undoubtedly, some truth in this observation, but without asserting anything too boldly, we may approach very closely to the truth by founding our opinions on the results of experience.

It is often indispensable to use purgatives in addition to the baths, but the drugs must be disguised, because melancholic patients imagine that they are being poisoned. Tonics, chalybeates, and quinine, are also of great service.

A powerful auxiliary in the treatment is family life (*vie de famille*). Guislain recommended melancholic patients to be isolated, and to rest in bed. The very frequent tendency to suicide by these patients in our country, and the turbulent character of the race, led me to adopt this plan more than thirty years ago, and I communicated it in 1866 to the French Institute. M. Lentz, the medical Director of the Asylum of Froidmond, in Belgium, has pronounced a warm approval of

my plan in his pamphlet, *Des Causes de l'encombrement toujours croissant des Asiles d'aliénés et des remèdes à y apporter* (1871). He agrees with myself in thinking that it is woman who takes the most important part in the management of this system, in which the influence of the affections is a positive good. A man's character cannot bend itself to this kind of slavery. The trial is, in fact, one of the most painful character, since it is necessary to hear continually the same complaints, the same sorrows, and often the same reproaches and even insults. To the qualities of her mind and heart, woman joins the natural control which she exercises over man. The following were the terms in which I expressed my views to the Académie des Sciences: "The advantages of the family life, especially for melancholic patients, are too evident to require me to insist upon them at any length. Patients are brought to us who are indocile, dissatisfied with everything, agitated or apathetic, believing themselves to be surrounded by enemies, refusing to do anything that is asked of them, irrational in their acts, incessantly complaining, difficult to please, and even insupportable to those around them, &c. A short time has scarcely elapsed since their admission before the social life in which they have entered softens their tempers, and they soon become friendly with their fellow-inmates. This is not indeed a cure, but it is already an improvement in their condition. Compare the spectacle you behold with that in which the compartments are separated, and where the sub-divisions are multiplied, I do not fear to say where the insane are penned (*parqués*), and it is impossible for the most superficial observer not to notice immediately the difference of the two proceedings. The deduction is quite natural. Do you wish to restore to society patients whose isolation necessity has compelled? Show them, then, the favourable side of that society by fulfilling towards them the functions of consoler and friend, of physician both of mind and body."

I related some striking examples in the memoir published in 1866, in the *Annales Medico-Psychologiques*, and since that time cases have been multiplied. I shall relate only one. An ecclesiastic had been confined five years in a very large asylum. Being transferred to us, he soon testified his satisfaction at the change. "I was completely isolated," he said, "in my subdivision, and no friendly voice sounded in my ears. Since I came here, these ladies have addressed to me only words of consolation, and I am most favourably impressed by them. I live in a totally different world." In a short time he was cured. He left us at the end of the month, and was able to resume his duties, which he had never performed since his first confinement

in the asylum. I have had news from him for several years, and he continues quite well.

The family life, the advantages of which are proved to me by long experience, is no more a panacea than the employment of prolonged baths and continued irrigations in the treatment of acute mania, but I consider this assemblage of patients under the intelligent direction of a woman as being far superior to the classification of the insane in compartments. Everything that resembles ordinary life in the management of mental diseases is preferable to any systems, however apparently well designed; and I have had sufficient proofs that the more the patients live in society the less unhappy they feel. Such is the remark made by Shakspeare in "*King Lear*." The family life, however, admits the painful measure of isolation in cases where such a step is necessary. This auxiliary to the general treatment is not only favourable to the cure of mental diseases, but it often retards, even for years, the progress towards the chronic stage. Lastly, its prompt application succeeds in several cases in weakening insensibly the insane ideas of the patients, and in developing among them some favourable manifestations which prove its influence.

The change of place, and the impression made by the asylum, must also be taken into account in reference to the cure. I have collected twelve cases in which some favourable results, due to these causes, have been immediately appreciable. Three of these patients, belonging to the female sex, were the victims of attacks of melancholia, and had been habitually depressed for one, two, and five years. In the first, whose attack of melancholia had been aggravated by the design of killing a person whom she named, the improvement was manifested on the very day of her admission, and it was well known to all of us what was the cause of her improvement. The second, who rapidly improved, began to be convalescent towards the fifteenth day. The third patient was the sister of a lunatic who had been placed in the house forty years before; she herself, who was always of a singular temper, would not see her daughter, who had been married five years, giving as her reason that she knew she was happy and that was enough for her. She had scarcely been admitted before the improvement appeared, and she became as kind to her daughter as she had formerly been.

A patient who had been apathetic for two years used to lose every two days his freedom of mind. He answered hastily, and even sent away his clients. The two following days he experienced some difficulty at first in co-ordinating his ideas, but he soon resumed the direction of his business; an analogous condition to that which exists in persons in their senses, who

have moments of disgust and apathy and cannot settle to anything. Being uneasy about his condition, he came to Paris of his own accord to place himself in my asylum. A favourable change was soon apparent, and he returned to his own home convalescent the second month after he came to live with me.

These facts, and many others, prove to me the favourable effects of change of place, and of the influence of the asylum.

The different methods I have described may each separately effect the cure, but their combination contributes more efficiently to that end. In addition to the physical and moral agents already indicated, which belong to general practice, there are others which are unforeseen and instantaneous, such as accident, or some word or idea or repartee, or some other circumstance, may bring into play, and which may produce the happiest effect.

A melancholic patient, tormented by hallucinations of hearing, which repeated to him incessantly what he ought to do, and at the same time prevented him from deciding upon it, was strongly urged by a person who had read my book on Hallucinations to confide himself to my care, assuring him (according to his opinion) that I should explain to him this morbid phenomenon, and enable him to get rid of it. After having listened to him with great and profound attention, I looked at him with an appearance of satisfaction, and taking my cue from the feeling of certainty that his cure had been accomplished, I spoke to him with the air of a person who was so sure of having hit his mark, that I saw the appearance of hope in his countenance. From the time of his interview there was a marked improvement, and he made such rapid progress that he left the establishment convalescent on the eighteenth day.

A suitable observation or a ready reply is equally efficacious, at an opportune moment, in arresting the attention and changing the course of the ideas. A lady complained of being placed under restraint, declaring that oddities of character, however morbid they might be, are not a sufficient justification for such a step. In the bath she made an attempt at suicide, by endeavouring to drown herself. Being called immediately, I said to her, "You asked me why you had been placed in confinement? It is acts such as these which explain the tendency of the mind." "That is true," she replied. The remark had gained its object. Reflection came to her aid, and the lady, having never thenceforth attempted any irrational act, went away convalescent in the course of the month. It remains to consider, however, the *when* and the *how*. Sometimes instinct is the best guide. We must, too, however much we may be tempted, never allow ourselves to be carried away by the usage

of the profession, but listen to the voice of pity up to the last moment.

Another melancholic patient, suffering from hernia, being dismissed from all the establishments in consequence of his continual complaints, which were often unfounded, began the same course of conduct in my house. His arguments being of a nature to cause some trouble, I said to him, "You may go away," and I showed him the door; "but yet," said I, "I should recommend you, in consequence of your hernia, to select an establishment where there is a skilful surgeon, for you are liable to serious risks." I had at that time as assistant a retired surgeon-major, who was a very skilful operator. My advice excited the patient's attention, and he determined to remain, and no longer once asked leave to depart.

This case recalls to my mind another, which is a striking example of the value of a word spoken at the suitable moment. In the first establishment which I conducted there was a furious maniac, whom we could approach only when we were accompanied by a number of attendants. He thought that he was the great Napoleon, and was constantly irritated because he was not treated with the respect due to his rank. One day, when he was exceedingly violent, and wished to execute everybody because they did not prostrate themselves before such an illustrious personage, my predecessor took it into his head to reply to him, "You are, it is true, Napoleon, but Napoleon is at St. Helena." At that moment this furious madman ceased to revile and to strike, and he repeated several times, "*Napoleon at St. Helena,*" and he afterwards became easy to manage.

Although the asylum is of great importance on account of the treatment and the discipline, and the society it promotes among the residents, yet there are several cases where the departure from it contributes to the restoration of the patients, or to their comfort, or may be indispensable for those objects. This plan may be limited or it may be complete, and its employment depends on the knowledge we have of the insane, and on medical tact. I do not allude to chronic invalids, who may go out every day with an attendant, or occasionally take walks with the officers of the establishment, but only to particular cases.

Among the means of treatment which I have employed several times with success, anticipated leave of absence, the suitable time for which is learned by experience, ought never to be neglected, and the following case affords a proof in point. A music-master, after an attack of melancholia, became more tranquil, though still retaining some extravagant notions. His

subsistence and that of his family depended on his business; and if his condition lasted some time longer, his position would be lost. I allowed him to go home. He had, however, some peculiarities. He began his lessons again, but returned to the asylum to dine and sleep. In two months he was quite well.

I have had two officials attached to great public establishments, one of whom was able definitively to resume his duties after a year of surveillance, although still believing that he was in the power of the devil; and the other obtained his retirement in three years, although he had visions and insane ideas. The principals of the establishments in question, being very intelligent men, and appreciating the services rendered by their officials, consented to the course I have described, when I represented the case to them.

An attempt of this kind may be made under more serious circumstances, if there are some indications either of a returning power of the will or of a commencing improvement. A merchant placed at the head of a great undertaking persuades himself that he has not sufficient capacity for such a position. An extreme degree of discouragement takes possession of his mind; he hears voices threatening him. He will not succeed, he will ruin his associates in the undertaking, he has nothing more to do than destroy himself. Three weeks pass without any appreciable change. One morning I saw him come in. "I am," he said to me, "still the same, but I cannot remain any longer, for my retreat will be discovered and everything will be over with me." I hesitated, but I had a kind of intuitive notion that the patient had just taken a step towards improvement. I gave him his liberty. Two months afterwards he thanked me. No one had found out his condition; everything was prospering; the experiment had been successful. The promised departure is sometimes a beneficial measure.

A melancholic lady was improving; she admitted that she had been ill, but maintained that there was not sufficient reason for shutting her up with mad people. As I was afraid that with this frame of mind she would cause some unpleasantness with her husband and with the establishment, I advised her family to take her back. She was scarcely made acquainted with the fact that she had only a limited time to remain, when a remarkable improvement took place. She became gay, easy in her manners, made no more complaints, appeared to be pleased with us, and departed quite convalescent.

When the acute stage is passed and the malady remains stationary, when there are no evil tendencies, and the patient wishes to return to his own home, and revisit his relatives, his wish ought to be granted. More than one melancholic patient

has been restored on finding himself in the midst of his family. I have had for a rather long time in my asylum a lady who appeared sunk in a kind of indifference from which nothing could divert her. I advised the husband to take her back with him. A few months afterwards, all the morbid symptoms had disappeared, and health was restored.

Visits of relations, which are justly regarded as dangerous in the acute stage of the disease, when it is still at its height, may, on the other hand, produce a marked improvement when the patients wish for them, and even in some cases when they occur unexpectedly. A young lady by chance caught a sight of her mother, who had come to ask after her. This patient, who was still in the period when her malady was increasing, experienced so much joy that convalescence soon ensued.

A cure may take place without any treatment having been adopted, as I have already mentioned, and may even occur suddenly. One of our inmates, who had had an attack of melancholia seven years before, had a relapse of her malady. Six days after her admission she came to me, saying, "I am cured, my visions are gone." I was unable to refer this instantaneous improvement to any known cause.

The cure may also be due to unforeseen circumstances. A lady, who had sunk into a melancholic state from sorrow caused by losses of money, made several attempts at suicide, and obstinately refused to eat. Being admitted into the asylum, she gained the affection of an old patient, who succeeded in feeding her. She gave her advice, and told her the histories of other inmates, in order to prove to her that their malady had attacked them because they had acted as she had done. By degrees she roused her up and made her smile. The insane ideas were removed, and the patient of our lunatic left us, repeatedly stating that to the latter she owed her restoration to reason.

Sometimes the passions serve as means of cure without the intervention of the physician. A man, about thirty years old, and rather reserved, having always lived a wandering life, was on the point of adopting a profession. When any discussions of importance were begun on this subject, he became irritated, experienced severe pains in his head, and believed himself in the power of persecutors, who were laying snares for him, and accusing him of wicked actions; he persuaded himself that he was dishonoured, and he made attempts at suicide. The second month of his residence in the asylum he showed some attachment for a lady-friend of mine, and from that moment a sensible improvement was perceptible in his condition; he became more and more enamoured, and proposed marriage. The union was impossible, but the cure was not interrupted. This unexpected

diversion of his thoughts produced the most beneficial results on his habits and disposition. Nine years afterwards we again saw our old patient, who had married, had had children, managed his house well, and was not at all moved by the sight of his former flame.

In other cases, the predominant feeling which had acted alone is sometimes employed by the physician, and lends him some valuable assistance. A working builder, who had received a certain amount of education, was brought to the asylum on account of some eccentric proceedings. He would not speak, answered nobody, kept his head high, and his look was proud, disdainful, and ironical. By his appearance I recognised him to be a wrong-headed person, who supposed himself to be the victim of the injustice of society. I addressed him as a well-educated man; I conversed with him about his abilities, the rank to which he had a right, and his misfortunes, and I continued talking with him in the same strain for some time. I perceived that I had touched the right chord; he unlocked his teeth, spoke a few sensible words, and consented to eat, which he had not done for several days. The improvement continued. I often directed the conversation to the position he might occupy, diverting his mind as little as possible from his real condition in life, but pointing out to him what progress he might make in it. He listened to me always with interest, saw things no longer on the dark side, thought that he might make himself useful, and departed at the end of two months under circumstances of health which led me to form a favourable opinion as to the complete return of his reason.

Nothing is absolute in the precepts of medicine. Although the length of time which has elapsed since the appearance of the disease is a contra-indication of success, it is not less certain that cures have been effected after several years of insanity. I have remarked three examples of this nature.

A very intelligent lady, who had managed for several years with remarkable ability a very complicated commercial undertaking, was seized with a fresh attack of melancholia similar to one she had suffered from thirty-six years before. She had remained five years in this state, keeping her bed for several months, when she saw a person belonging to my family going to the midnight mass at Christmas. "Pray God for me," said she to her. During her illness she had contracted the habit of *thee and thouing* (*tutoyer*) every one. On the return of the person alluded to from the mass, who came to ask after her health, she replied, "I thank *you*" (*vous*, not *te*) "for having prayed for me." This difference of language immediately made me think that her condition was about to change, and, in fact,

from this time her continual complaints were no longer heard. She left her bed and came into the drawing-room; and in two months more she was quite well. She has visited us for several years without having felt any symptom of her malady.

A second case of melancholia, coming from another asylum, where she had already passed several months, was sent to me in an extreme degree of weakness. For more than a month she had been fed with the tube. I ceased this plan of feeding, and substituted for it the method I adopt in similar circumstances, which consists in making a disagreeable impression on the patient, and which has almost always succeeded in my hands. On the second attempt she consented to take her food like the rest, and this was the only improvement I succeeded in obtaining. For a long time she urgently requested to be allowed to receive her husband and her son. A visit from the former had no successful result. It was thought that the sight of her son would be more efficacious, but I did not share this opinion, because she had visual illusions, which, indeed, were soon developed. She recognised neither of the two; took them for strangers, insulted them, and even wished to strike them, thus producing such a powerful emotion in the youth, that he burst into tears, and uttered loud cries. The experiment was not repeated. At the end of five years this lady was placed in a government asylum, from which she went out cured two years afterwards. It was she herself who announced to us her return to society, and the termination of her mental affection.

The third patient, whose attack was of ten years' duration, had lost her reason in consequence of an indecent act on the part of her husband, which had compelled him to resign an important position, and to leave his native town and to come and take a business in Paris. Since the circumstance in question, domestic life had become a hell upon earth; the husband had resisted as far as he could, for, as if she wished to be revenged on him, she related his story to every one who came. The distant date of the commencement of the malady made me look unfavourably on its probable termination, though hoping the case was not desperate, inasmuch as no intellectual weakness was discernible. In the first few months no change was manifest, but one day she spoke, for the first time, some kind words of her husband, and this was the announcement of an almost un hoped-for improvement. Her progress was rapid, and of her own accord she asked to return home to her husband.

Insanity, when joined with other affections, and more especially those of a nervous kind, may neutralise them to its own advantage, or even disappear with them in a general cure.

A patient who had suffered from a gastralgic affection for eight years, at last became emaciated, acquired a yellow tint, and could scarcely eat. Whether the attack of melancholia, which had lasted for some months, was the consequence of the former disease, or that it had been induced by the distressing nature of his condition, it made such progress that his friends were obliged to send him to the asylum. A short time after his admission he began to take food in greater quantity. Three months had scarcely elapsed before he had become stout, his face was of healthy colour, the jaundiced appearance was no longer visible, and the melancholia had disappeared at the same time. His health and his reason were restored. Another sufferer from gastralgia, who was habitually reserved and gloomy, exhibited a result exactly similar, thus offering a fresh example of the close relationship existing between nervous diseases and insanity. The affection, from which he had been suffering for years, prevented him from taking sufficient food, and he was visibly becoming emaciated. In consequence of the aggravation of the melancholic symptoms he was placed in the asylum, and he was soon observed to have an appetite, which was not previously known to exist; he rapidly gained flesh at the same time as the intelligence was becoming re-established, and he left us cured of both his maladies.

Among the plans of treatment I have indicated, there are two which have not been mentioned. They have a relation to two classes of symptoms of extreme gravity, namely, the refusal of food and the tendency to suicide, both of which require special remedies.

The motives which induce melancholic patients to refuse food are very various. Ideas are detected which have no reference to such refusal; irresistible impulses; a feebleness of resolution; and a complete forgetfulness of past events; but most generally there are hallucinations, illusions, gloomy ideas, an extreme disgust of life, and, above all, a feeling of despair in regard to their dreadful condition. It is inexpedient to be too hasty in having recourse to forcible alimentation, for some of these patients, after fasting several days, take their food; but others are satisfied, for a month or more, with a cup or two of broth or other liquid, even when they are robust and are great eaters. If the refusal of food is obstinate, and founded on an insane notion or hallucination, if the breath is fetid, if there is no febrile disturbance, then forcible alimentation is indispensable, and it must also be resorted to, even though the patient should consent to take food from time to time, but in small quantity; because very often, at the end of this prolonged insufficiency of food for several months, the patients have died and have wished to die.

The instrument most generally employed is the œsophageal tube, either simple or modified, of MM. Baillarger and Blanche. It is not uncommonly the case to be obliged to use it for rather a long time, as the patients become accustomed to the proceeding. Dr. Zelarchi has related a curious case in which this plan was adopted during two years and fifty days. The silver mouth-piece of M. Billod is also useful.

The facility with which a good number of insane patients allow themselves to be fed by these plans, the long continuance of the malady which results from their adoption, and the chronic state which has seemed to me to follow their use, have induced me to practise, for more than thirty years, a method of treatment which is painful, indeed, but which, in my hands, has a different kind of efficiency from the œsophageal tube.

The following is the plan I adopt. When the patients are brought in who have eaten nothing for several days, and are sometimes even exhausted by fasting, I warn them that I shall be under the painful necessity of subjecting them to a painful mode of treatment which will do them much harm. "My conscience," I add, "does not permit me to be present, as a mere witness, at the loss of a man who might be saved in spite of himself." Some are intimidated, and yield for a time. The greater number resist, and we then put a strait-jacket on the patient, and fix him in an arm-chair, from which he cannot move, called a *fautueil de force*, or lay him on his bed. We then introduce into one of the nasal fossæ a tube armed with an iron rod, slightly curved at the lower end, and pass it as far as the back of the mouth, when the rod is withdrawn. I do not endeavour to pass the tube into the œsophagus, because that is not the object in view. An assistant closes the mouth with his hand or a napkin several times folded, another assistant applies his fingers on the nostril which is free, and we pour in the broth, tapioca, chocolate, &c. with the aid of a funnel, the end of which is introduced into the tube. An injecting syringe may also be used, the end of which is placed in the tube. The patient makes the greatest efforts not to swallow, but, in order to breathe, he is obliged to perform the act of deglutition. As soon as the syringe or the funnel is empty, we allow the patient to take breath for a few seconds, and then we begin again to pour in fluids. There is undoubtedly great struggling and embarrassment of breathing, but seldom any symptoms of commencing asphyxia. There is also almost always a certainty of speedy success, for the greater part of these patients yield at the first trial, and will seldom brave the second, especially if the physician has shown determination and refused to allow delay. Besides, the terror of the tube sometimes acts like a

true moral revulsion, and the patients are not only cured of their instinctive perversion, but also of their insanity.

A young girl refused to take any food because everything offered to her appeared in her eyes to be covered with sperm. Reasoning and other means employed had been unsuccessful. Forcible feeding cured her in two days. A young woman and an aged lady were brought to me this year (1872), who for several days had obstinately refused food. Their weakness was extreme, and there was even an apprehension that they would die. The aged lady was a fresh victim of the attacks of the newspapers, for, the family to which she belonged having divided interests, it had been necessary to hold a family council in order to come to a decision about sending her away, and to obviate unjust accusations as to shutting her up. After a few days' residence in the asylum the cure was effected. Neither of them resisted more than twice the treatment just referred to, and the young lady went out cured in the second month. One of the most decisive examples was that of a paralytic lunatic, who kept his teeth so firmly clenched that it seemed easier to break them than to open his mouth. This patient thought that the devil had got possession of him. On the second introduction of the instrument, he took his food easily. His abstinence, which had lasted from five to six days, had given him the appearance of a person with organic disease; he exhaled a fetid odour, his lips and tongue were black; but all these signs disappeared in three days, and from that time he again took his food. It was only necessary to show him the tube to make him obedient. This plan fails in a few rare instances, and requires great prudence, but, on the whole, it has been attended in my hands with beneficial and rapid results. Forcible alimentation is almost always unsuccessful in the febrile state.

The refusal of food may, sometimes, depend upon separation from the domestic circle. In two cases, in which this cause was clearly proved to me to exist, I sent away the patients to their homes, and this course was attended with success. In another case, after improvement for a few days, death supervened. It happens, on the other hand, that melancholic patients who would not take any food from the hands of their relatives, take it when they are sent to an asylum, and the apprehensions they have entertained then disappear. A young man from the provinces, who had abstained from every kind of food for five days, sat down to table as soon as he came to the asylum, and at the end of ten days he completely recovered.

A happy thought, as I have already observed, may be sufficient to overcome this obstinate refusal of food. A patient

presenting symptoms of imbecility, and who had not spoken for three or four months, suddenly ceased to eat, and this abstinence was prolonged for six days. This case occurred at the beginning of my career, and the family, being alarmed, requested me to call in Esquirol in consultation. This distinguished physician prescribed some medicine, but especially recommended that the patient should be immediately taken into the country, in order to divert his ideas. It was six o'clock, and I had a few friends to dinner. We sat down at table, and I took it into my head to have the patient brought in. At the sight of more numerous dishes, and food more delicately prepared than usual, he smiled, took what was offered him, and ate with a good appetite. The crisis was over and did not re-appear. What is most surprising is, that this patient, whom we had believed to be imbecile, was restored to reason several years afterwards.

The second very serious symptom of melancholic insanity is the tendency to suicide, with attempts to effect that object, and sometimes even with fatal results. It often manifests itself, for out of my 417 cases of melancholia, deducting 122 persons who had only gloomy thoughts of death, without attempting to meet it, I have noted 120 cases with attempts, and 7 with actual suicide.

The rather large proportion of those whom I have known to attempt self-destruction by plunging their heads into their baths; throwing themselves from the top of a tree or from a roof; stabbed in a few moments; dashing themselves against a wall or against a pane of glass in their rooms; succeeding in killing themselves even before our eyes, as happened to Guislain, or in the presence of a servant, and sometimes while the servant was asleep; and the rapidity with which these fatal intentions are carried into execution by the French—all these circumstances have made me resolve to employ coercive measures with patients whose suicidal tendency is obstinate, and accompanied with attempts in spite of our precautions. When the idea of suicide is not stereotyped on the countenance, when the acts are not repeated, and when the patients pay some attention to what is passing around them, then, before employing precautionary measures, we keep them under our own eyes, and this watchfulness on the part of the principals of the asylum, continued for a long time, often arrests in a remarkable degree their desire of death.

The strait-jacket and cuffs are the measures of repression which I most commonly employ. The language we adopt with the patients under these circumstances expresses the regret we feel at being driven to this sad extremity. We represent to them, in a tone of kindness, that the confidence

reposed in us by the relatives, the distress caused by suicide, and the account we have to render to the authorities, compel us to act in this manner. When the eye of the patient has returned to its natural state, or has lost its fixed appearance and its sinister expression, and when the predominant idea has been weakened and no longer reveals itself, except at distant intervals, then we relax our precautions.

Some years ago I wrote to the effect that, in cases of this kind, the important point was to gain time and to make sure of the expression of the face. When the physician has devoted himself constantly to this study, he can read the mental condition of the insane patient as well as he can that of a man in his senses. A guide which singularly assists in this study is a knowledge of the previous life. In the employment of the measures alluded to, much tact is necessary as well as firmness and gentleness, and it is necessary also to discriminate the cases, and always to speak to the patients, according to the excellent advice of Daguin, in the language of reason, even when they do not appear to understand it.

It will be observed that I have but little increased the catalogue of medicines adapted to melancholia, although I have known relief afforded by the bromide of potassium and chloral (especially the latter), in procuring sleep, and such is the general result of experience. My opinion has been formed for a long time as to the preference which ought to be shown to simple modes of treatment. Baths, purgatives, hygienic measures, and moral treatment, especially the living in society (*vie de famille*), constitute the methods I have adopted during a career of fifty years, and they are the means which have succeeded best in the treatment of melancholia.

As a general conclusion regarding the treatment of this mental malady, I may say that I have known it to be successful in a good proportion of cases. Although some patients recover in their own homes under medical treatment, or by unforeseen circumstances, the greater part of them owe their restoration to reason to the care bestowed upon them in the asylum; and what deserves notice is that the most numerous cures take place from the first to the third month, when the patients have been received in time.

ART. III.—OPIOPHAGISM.

BY W. A. F. BROWNE,

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"This wonderful drug."—*Sir Robert Christison.*

THERE is ground for wonder that opium never found a place in Mythology. The source of light and heat, the cold chaste moon, fountains and groves, loathsome animals and insects, abstractions and sensations, have all become objects of worship, but not this drug, nor the flower which yielded the drug, nor the ecstasies or euthanasia which sprang from its use. Were we to accept without qualification the description of these gratifications, of the enlargement of intellect, the sublimation of emotion, given by certain of its votaries, in days when deification had ceased to be a creed or a custom, we might be led to imagine that inspiration has been imparted, and the glories and delights of immortality anticipated. Even the grossest, the most degraded, passions and practices have been raised to the rank of gods, and had their rites and worship. It may be true that the poppy was intertwined with ivy and vine leaves of the coronal of Bacchus; but we are not entitled to believe that its juice had mingled with the wine which empurpled and bloated his cheeks. Even in the land where the poppy grew in every field, and where every field and flower and object was consecrated to, or peopled by, divinities or nymphs or naiads, there is no evidence that the divine essence, which for a season either elevates or obliterates man's consciousness, was ever raised to a higher rank than that of a sleeping-draught. In the same region and climate the thebaic elixir was prized for its medicinal virtue, and is, perhaps, the earliest example of a formula for laudanum, if it be not the nepenthe of Homer. It is certain that the substance was employed medicinally by the Greek physicians centuries before the Christian era, and Dioscorides and others describe the mode in which it was obtained from the capsules of the plant; and all know that its name and properties occur in the works of Pliny and Celsus. In the earlier ages of the Christian era, which form a very remote and misty antiquity in the history of the precious drugs, the allusions to opium are rare, but in 1288 it is mentioned by the physician to Pope Nicolas IV. Somewhat subsequently it appears to have been sent, with camphor &c., as a present to royal personages, and in 1516 it had become an article of merchandise, and is

described by Pyres in a letter to the king of Portugal as in great demand among the nobles and the rich in Egypt, Cambay, &c., where the consumption seems to have been limited solely by the price.* All authorities are agreed that the use of opium as a luxury was communicated by the Arabs, who have likewise been the greatest patrons of hachisch, to the other Eastern nations, and that the rapid and almost universal recourse to some form of the narcotic, especially as a substitute for stimulants, was commensurate and contemporaneous with the spread of Islamism. Absence from one species of intoxicant thus became provocative and a pretext for excess in another more fatal and formidable. From the East it would appear that we have derived, with many nobler gifts and secrets, our knowledge of the powers and virtues and abuses, as well as our supplies, of opium. It is, however, only in recent times that the traffic in this commodity has assumed almost gigantic importance in commerce. Known in China as a cure for dysentery from the ninth century, it has latterly become a means of sensual indulgence, a scourge to millions, and constituting a distinct and lucrative department of trade. It is supposed that 3,000,000 Chinese, and that 94,000 out of 9,000,000 natives of Java, smoke opium. Importation into the Flowery Land seems to have been begun by the Portuguese in 1767, but was continued on a much grander scale by the East India Company from 1793, the amount swelling up to 40,000 chests in 1837, certainly with the connivance of the local authorities, although the import was ostensibly regarded as contraband, and its use sanctimoniously denounced in public edicts as immoral and injurious. And it is suggestive that a similar illicit traffic in this substance has been introduced by the Chinese emigrants to California. The quantities received in this country are enormous and startling. These amounted in 1872 to 356,211 lb., valued at £361,503.† Were the appetite for indulgence in this narcotic or the number of opium-eaters measured by this standard, the decline and fall of our social system might be confidently predicted; but it must be remembered that a portion of this raw material must be utilised in the preparation of morphia and the other alkaloids for exportation, that a large portion enters into one-half of the prescriptions, placeboes, and pick-me-ups made by vendors for medical and domestic use, and that an unascertained and unascertainable portion is applied in the adulteration of beer and spirits, in

* *Pharmacographia: a History of Drugs.* By F. A. Flüchtyer and D. Hanbury. London, 1874. *Passin.*

† Flüchtyer and Hanbury, *ut supra.*

the composition of those hard ales and hoccussing draughts which, taken wittingly or given nefariously, produce sudden insensibility and impulsive madness. There is a wide-spread but ill-defined suspicion that laudanum is secretly consumed by very large numbers of the upper and lower classes as a substitute for or in conjunction with alcohol; that it is a favourite dram with the overworked, underfed, and exhausted artisan; that it is given by mothers and nurses as a soothing quietus to their children and charges, and tends directly to the increase of infant mortality, or indirectly by the production of convulsions and other nervous affections to the impairment of health; but the evidence on these points is vague and imperfect, and an impenetrable veil is drawn over, not the existence, but the proportions of this hideous vice. It is perhaps a tribute to virtue and propriety that the literature upon the subject is almost barren, and that the concealment of the indulgence is so successful as to defeat enquiry. In a celebrated trial in Edinburgh, which took place about forty years ago, when an insurance on the life of the Earl of Mar was disputed on the ground that he was an opium-eater and intemperate for thirty years, all the distinguished medical men of the Northern Metropolis confessed that their experience was too limited to justify them in asserting that the practice was calculated to shorten life, although they could speak to its evil effects upon the constitution. Although this nobleman for some time purchased solid opium to the extent of forty-nine grains, and laudanum to that of one, two, or three ounces, and was supposed to swallow that quantity daily, the jury decided in favour of his trustees. It is probable that at present the prevalence and patency of such a habit, and the supervention of physical and moral consequences on its long continuance, may have furnished medical observers with more ample information; but, unless the indulgence be pursued to excess, or has become complicated with grave maladies and infirmities, it rarely attracts attention. Through the instrumentality of friends, physicians, clergymen, and parochial officials, searching enquiries have been made as to the beverages of the population of manufacturing towns; in certain of these there is declared to be a clean bill of moral health, opium being unknown as a means of excitement; in others it may be sparingly resorted to; but in general the inhabitants of agricultural districts are boldly accused of being wholesale consumers. In one country town, containing a population of about 17,000, ten regular opium-eaters were traced by their weekly application to the apothecaries for supplies of this drug; such persons, however, representing one, and that only the lowest, class. But it is assumed that the persons thus marked

purchased *large* quantities. Of the recourse to narcotics, when taken in what may be sarcastically called moderation, little or nothing is known. I am acquainted with a lady who took laudanum in drachm or ounce doses for twenty years, in the bosom of a large family, without the slightest suspicion having been excited; and with another, whose husband was so shamefully ignorant of the baneful effects of the poison, that he laid in a store of gallons, and administered to his wife twice a day a wineglassful as an important article of diet. Small doses, or doses to which the system has become habituated, are supposed merely to stimulate, but not to disturb the mind; to soothe irritability, to induce placidity, pleasurable feelings, gentle and friendly relations, to restore the strength and activity enfeebled by previous indulgence, and to render the partaker himself capable of discharging his duties and occupations by imparting the artificial and temporary health which at once deceives the victim and baffles the keenest scrutiny. As yet we are ignorant of the minor mental phenomena attending the use of opium in small quantities, or when swallowed at the same time with spirits, wine, &c.; stupid, soporose drunkenness may follow, but it would be rash to assign such symptoms either to the one agent or to the other. De Quincey enters into an animated and eloquent disquisition in order to prove that the phenomena which succeed even excess in the drug are not those characteristic of intoxication; and although we might hesitate to admit the evidence of one who, although a skilled, must be regarded as an interested witness, this distinction must be recognised. Many years ago I was visited by a distinguished scientific friend, known to me to depend, according to his own fallacious convictions, upon morphia for his vivacity and brilliancy. On his arrival his figure was bent, his step slow, his hand tremulous, his features pale and haggard, his eyes sunken and lustreless, and he seemed an old man tottering on the extreme verge of age and life. While dinner was preparing he retired to his room; in the course of about an hour he joined my family. The transformation was complete. His gait was firm and assured; his muscular system was restrung, and had grown in roundness and fulness; his face presented the aspect of youth, with something of the flush of that period; his eye was clear, sparkling, restless; his conversation clever, cheerful, fascinating. In a brief space, and in spite of one or two glasses of wine, the rejuvenescence gradually faded away from my eyes into the spectre I had so recently seen and bemoaned. Twice during the same evening did the same events follow each other in the same succession. A wan and withered phantom retired from our presence, and a bold and buoyant man

returned. My friend's wife revealed that during each absence the solution of morphia was taken; but had I been unfamiliar with his habits, I should undoubtedly and justifiably have referred these alternations to caprices of tone and temper, to the vagaries of genius, or to bodily decrepitude. Notwithstanding the doubt and darkness which shroud this as well as all the other tragedies of our life-drama which close in self-destruction, partial glimpses are obtained behind the proscenium which suggest the revolting extent of this evil. Dr. Lyon Playfair, M.P., in examining a medical witness from America, before Mr. Dalrymple's Committee on Habitual Drunkards, put the following case and question:—"Let me quote this case as occurring in a particular street in Manchester, where three druggists supply between them 600 families of the poorer classes weekly with opiates; are you likely to have any such cases in Philadelphia?" In answer to which it is stated: "There is no doubt that it is done to some extent. There are druggists who keep the ordinary laudanum, what is called officinal laudanum, of a given strength, for medical purposes purely, and who make at the same time a diluted or more inefficient laudanum, for the purposes of drink. I know of cases where persons are in the habit of purchasing a milder form of laudanum by the pint or quart, and using it instead of alcoholic liquors." But it is added that "inebriation by opium is not known to the people as alcoholic excess is." * In a recent letter from this distinguished philanthropist to a friend, now in our possession, he states that the quotation used by him was extracted from his report on the "State of Large Towns in Lancashire, II. Report of Health of Town Commissioners," where is likewise to be found evidence to the effect that in Preston 1,600, or about one-third of the working population, are known to be in the habitual use of narcotic drugs for children, allowing half an ounce per week for each family. It has been estimated that in Amoy from 15 to 20 per cent. of the inhabitants are opium-smokers, while in China generally the proportion is from 5 to 10 per cent.; a calculation which, although perhaps only approximative, would indicate that millions have become infected with this ruinous propensity. Upon more trustworthy data, it would appear that in the island of Singapore 15,000, out of a population of 70,000, are similarly addicted.† While this is the rarest, and perhaps most deleterious, form in which the delights of opium are sought in Europe, it must not be regarded as entirely exotic. I do not here allude to the dens in London, where the Lascars and other Orientals seek their

* *Minutes of Evidence before Committee on Habitual Drunkards*, 1872, p. 160.

† "On the Habitual Use of Opium." By Robert Little, Esq., Surgeon, Singapore. *The Journal of the Eastern Archipelago* for January 1848.

national gratification, which have recently been described and delineated in an illustrated periodical,* and shadowed forth in the fragmentary novel of "Edwin Drood"; but to instances where our countrymen have sought for solace and somnolency from smoking opium or opiatized tobacco. A still more infrequent mode of securing the anodyne effects of the drug is by hypodermic injection. I have known two ladies who adopted this method. In both the pretext was to allay the pangs of neuralgia; but in one, whatever the origin might have been, the craving became morbid, and the self-conducted operation had been so repeatedly and clumsily performed by the sufferer, that 300 wounds or thrombi could be traced upon the abdomen and thighs, when, either from the local irritation arising from them or from the poison, insanity supervened, and she came under medical examination. A somewhat similar case is given in the *American Journal of Insanity*,† where a woman, labouring under peritonitis, consumed one to two drachms of morphia weekly, by imitating the surgical operation so frequently and awkwardly as to have pushed the needles perpendicularly through the integuments, 300 of these having been voided during life or found in the viscera or superficial abscesses after death, which followed abstinence for three months during an attack of insanity. In a large number of individuals the solid substance is taken as a quid, gradually dissolved in the mouth and swallowed with the saliva; but by far the largest number resort to laudanum. Although so popularly known and so constantly ordered therapeutically, morphia does not appear to be so great a favourite as crude opium; although the facility with which the alkaloid and its salts can be concealed may lead to error in this respect. I have known a case in which the preference of the muriate was evidently determined by the ease with which it was conveyed by letter, and another in which a cough and lozenges served to mystify all around as to the practice, which was pushed, however, to utter unconsciousness of very long duration. In many such examples, the salt has been administered as a medicine, and has been subsequently furtively obtained to assuage pain, as in cancer, neuralgia, &c., or to enhance the pleasures of society. It would be impossible to determine the amount required to satisfy the longings of any class of opiophages; perhaps each individual begins with small doses, gradually, insidiously, almost unconsciously, even experimentally, increased; but my own experience, and that of others, point to two, three, or four ounces per day as the average quantity taken by confirmed and

* *The Illustrated London News*, August 1, 1874.

† *American Journal of Insanity*, July 1872.

chronic consumers. A patient under my care placed one drachm of the solid substance in his cheek, and replaced it when necessary. Sir R. Christison mentions a similar case, and speaks, though not upon his own authority, of persons who swallowed nine ounces, eighteen ounces of the tincture, with impunity.* It is recorded that, calculating the consumption of 299 smokers in Singapore, each individual used 30 grains of an extract, equivalent to 50 grains of crude opium, per day. By another estimate of 603 smokers, the same proportion is obtained; but, when carried to excess, 116 grains have been used, and, in fact, the amount seems to have been limited by the inability to procure the drug. One hundred and forty pounds are said to have been the monthly supply demanded by the inebriates of the island. These quantities, however, sink into utter insignificance when compared with the indulgence of certain amateur visionaries of our own island. Coleridge (we quote the statement of his friend Cottle†) took from two quarts of laudanum per week to a pint a day, and, upon one occasion, a quart in twenty-four hours. De Quincey—we quote his own words: “I descended suddenly from 320 grains of opium, that is, 8,000 drops of laudanum, to 40 grains, or one-eighth part;” and again, “In about four years, without any further efforts, my daily ration had fallen spontaneously from a varying quantity of eight, ten, or twelve thousand drops of laudanum, equal to 480 grains of opium, to about three hundred.”‡ It should be understood that those who seek the extinction of life and suffering—in other words, dying made easy—effect the object by much smaller doses. These statistics naturally suggest an enquiry into the causes and circumstances under which such an indulgence is voluntarily initiated. Headed by De Quincey, the majority of victims assert that refuge from the pangs of toothache led to the adoption of this cure. Coleridge, who blamed rheumatism, and the misinterpreted or misapplied advice of a medical journal, is the representative of another class; but pain, in some place or form, sleeplessness, malaise, are often referred to as its origin; while the habit is engrafted and engrained by the suffering, the sinking, the wretchedness, the restlessness, which attend abstinence, or by the positive physical pleasure, and the imaginary mental exaltation and expansion, which are supposed to be secured during its earlier stages. I have the confession of an eminent literary celebrity that, overtaxed by toil in com-

* *Edinburgh Dispensatory*, 1848, p. 682.

† *Early Recollections, chiefly relating to the late Samuel Taylor Coleridge during his long residence in Bristol*. By Joseph Cottle, vol. ii. p. 149.

‡ De Quincey, *Selections, Grave and Gay*: “The Confessions” &c. pp. 220, 240.

position, recourse to opium was accompanied, not merely by disappointment, but by a disastrous interference with the elimination of thought. Even in De Quincey, who boasted of the restorative, even creative power of the stimulant, his publishers could invariably detect, by his mode of writing, and the hazy vague style of expression which he adopted, the point at which his natural genius was obscured or ceased to act, and when the influence of the drug came into operation. It has been asserted that much of our poetry has flowed from fountains of gin and water, and it would be of passing interest could it be discovered whether the sleep in which "Kubla Khan" was written was natural or comatose, and which of the inspirations of De Quincey were diluted by his laudanum negus.

In reference to the pain which is so frequently pleaded as an apology for opium-taking, it should be remarked that if a dossil of lint be steeped in thirty drops of laudanum, and the pledget thus soaked laid on the course of a nerve proceeding from a whitlow, for example, and throbbing and thrilling in exquisite pain, the suffering is mitigated; if placed in contact with a convulsed muscular fibre, the movement ceases. If the same quantity be swallowed, the carkings of care are blunted, the tears of grief are dried, even the tremor of the terror-stricken is calmed, and the clamorous conscience is lulled to that sleep which the wearied covet. Are the processes, by which these different physical and psychical conditions, so widely separated by their nature and origin, interfered with, the same, or in what manner are they allied to each other? How does this vegetable juice triumph equally, though temporarily, over a toothache and a heartache? In no case can the pain-queller be detected in the circulation, although in cases of poisoning its alkaloid &c. have been so; but we are in no degree assisted in our attempt to answer this question, or to trace a connection between the effects enumerated, by supposing that the liquid or solid opium acts directly upon the nerve tissue. The difficulties as to the operation of the drug are even augmented when we follow it in systems where there is no pain to assuage, and into the realms of partial unconsciousness, or where it saps the foundations of the moral nature. The delirium of the opium-eater or smoker, and the dreams which follow its legitimate use, are not merely pleasurable, but are generally alleged to impart exquisite enjoyment, and such brilliant fancies as to transcend all real and healthy impressions received in the sober and waking state. Although the effect of opium is universally and invariably, though in different degrees, agreeable, soothing, stimulating, elevating, the intensity of the action, and the

mode in which sensibility and imagination are affected, greatly vary; but, whether it soothes or stimulates, is the poison imbibed by the nervous tissue, creating changes therein, incompatible with pain, or is the poison or its influence—and it would be difficult in such a juxta-position to define this term—conveyed along that tissue to the brain, as the centre of perception, or to the will, which may direct attention, whatever that may be, to the source of suffering, structural or moral, as the case may be, and may not this influence act in all instances upon sensibility, or whatever constitutes the sentient Ego itself, for of the exercise of such influence upon supposed molecular changes we know absolutely nothing? These questions are greatly complicated by the fact that both morphia and Indian hemp seem to transmit from the central consciousness, and to localise in different and distant spots, certain sensations, in the former case itchings, and in the latter case feelings of weight, increased size, &c. It has been stated that the most difficult problem to be dealt with is the nature and consequences of the psychical operation of the drug. I have very recently conversed with a person who has taken two to three ounces of laudanum a day for twenty-four years, sometimes with, but more generally without, the perturbing adjuncts of stimulants and chloroform. His mind is intelligent, but not emotional or fanciful, and the analysis of his experiences is plain, prosaic, and practical. Sought in early years as a relief from toothache, what proved a remedy became a gratification, as imparting calmness, passiveness, agreeable indolence, and what was conceived to be a keen appreciation of certain external impressions, such as music. It is quite obvious, however, that this intense sensibility in his case, as in that of many others, was entirely subjective, and depended, not upon the concord of sweet sounds, but upon the abnormal condition of consciousness. When De Quincey, during his “opium debauch,” visited the opera, it was the fumes and the fancies arising from his potations, and not the harmony and lengthened sweetness long drawn out—the drug, and not the drama—which caused the “thrilling,” “shivering” unrest and divine afflatus which, as he affirms, crowded his paradise. Acting under such an erroneous belief, it has come to our knowledge that a public speaker who was to make his *début* in the debate on the Reform Bill had recourse to his usual potion, but, a cunning adversary having delayed his opportunity of addressing the House, he utterly broke down in oratory, memory, and self-possession, either because of the potency, or the waning potency, of the drug; and that a clergyman, trusting in the pulpit to what had been a faithful support under other circumstances, became

confused, incoherent, and unintelligible. The only positive assertion of the exaltation of creative artistic power which we have met with is in a description of the success of the opium-smoking fan-painters of Swatow, but this testimony applies only to three members of a numerous craft, and does not connect the beauty of the design with the state of exhilaration or phantasia.* Among the first and least fantastic pictures drawn by De Quincey, the most gifted and successful painter of such delights, is the following:—“In an hour what a revulsion, what a resurrection from its lowest depths of the inner spirit, what an apocalypse of the world within me! That my pains had vanished was now a trifle in my eyes; this negative effect was swallowed up in the immensity of those positive effects which had opened before me in the abyss of divine enjoyment thus suddenly revealed. Here was a panacea for all human woes; here was the secret of happiness, about which philosophers had disputed for so many ages, at once discovered; happiness might be bought for a penny, and carried in the waistcoat pocket; portable ecstasies might be had corked up in a pint bottle, and peace of mind could be sent down by the mail.” The second stage of these ecstasies may be suggested by the following passage:—“O just and righteous opium! that to the chancery of dreams summonest, for the triumphs of despairing innocence, false witnesses, and confoundest perjury; and dost reverse the sentence of unrighteous judges; thou buildest upon the bosom of darkness, out of the fantastic imagery of the brain, cities and temples, beyond the art of Phidias and Praxiteles, beyond the splendours of Babylon and Hekatompylos; and, from the anarchy of ‘dreaming sleep’ callest into sunny light the faces of long-buried beauties, and the blessed household countenances, cleansed from the ‘dishonours of the grave.’ Thou only givest these gifts to men; and thou hast the keys of Paradise, O just, subtle, and mighty opium.” At a more advanced period his impressions are thus expressed: “I came suddenly upon Isis and Osiris: I had done a deed, they said, which the ibis and the crocodile trembled at. Thousands of years I lived, and was buried in stone coffins with mummies and sphinxes, in narrow chambers at the heart of eternal pyramids. I was kissed with cancerous kisses by crocodiles, and was laid, confounded with all unutterable abortions, amongst reeds and Nilotic weeds.” . . . “I ran into Pagodas, and was fixed for centuries at the summit, or in secret rooms.”† Apart from

* *The Straits of Malacca, Indo-China, and China; or, Ten Years' Travels, Adventures, and Residence Abroad.* By J. Thomson, F.R.G.S. London, 1875.

† De Quincey, *Selections, Grave and Gay*, pp. 115, 213, 268.

the rhapsody which accompanies these descriptions, they contain nothing but what the luxuriant imagination of the poet might have suggested; the immensities or immeasurabilities of time, the immobility or disinclination to move, have all been conceived by commonplace participants in such dreams; but the struggles, the agonies, and the remorse, real or affected, which succeed, connect this account with the history of Coleridge. To this I would refer not for gorgeous or grotesque phantasmata, but in order to introduce other unhealthy mental manifestations, which appear to arise from long-continued narcotism. The most startling of these are (1) the total abolition of natural ties and affections, his estrangement from and indifference to his family, his lavish expenditure of all his means upon secret indulgence; (2) his pretended penitence, piety, reformation, while he adhered to his indulgence, deceived his physicians, friends, guardians, craved protection in an asylum, and felt so humiliated as to prefer "annihilation to heaven"; (3) his disregard of truthfulness, honesty, sincerity, and his inability to exert his will in any other direction, or for any other purpose except the gratification of his morbid appetite, an infirmity which he has most graphically defined as "an utter impotence of volition." In many of these impairments or vitiations, De Quincey and the less distinguished crowd of inebriates, in various degrees, participated. In depicting an opium-smoker and his resort in Singapore, Dr. Little says: As he entered, his looks were the picture of misery; his eyes were sunk, his gait slouched, his step trembling and his voice quivering, with a sallow cast of countenance, and a dull, unimpressive eye. He who runs might read that he is an opium-smoker, and, if he could read still deeper and dive below appearances, he would pronounce him an opium sufferer; but, soon after replenishing his pipe several times, enjoying during the intervals the waking repose, agreeable sensations, and misty reveries, following the inhalations which have filled and been retained as long as possible in his chest, he sinks into the perfect bliss or complete oblivion which he has desired; but, after a glazing of the eye, relaxation of the features, and deeper and deeper inspirations, and a disturbed sleep, he awakes to a consciousness of his real position and misery. Languor, lassitude, loathing of food, aching of the limbs, gloom, and indefinable wretchedness succeed, and are only mitigated by new and, perhaps, increased indulgence. This unfortunate returns to his neglected home either to tempt its inmates to join in his orgies or to obtain means for their repetition. In order to accomplish this object the sacrifice of prudence, property, respectability, and honesty is made. Of 40 prisoners in the House of Correction at Singapore, 35 were

opium-smokers; 17 of these, with 18s. a month wages, spent 24s. on opium; one, with 12s. a month wages, spent 24s., theft supplying the difference. Stimulants in Europe lead to crimes against the person, opium to crimes against property; stimulants to violence, opium to depression, cunning, fraud. In Singapore and Penang, of 22 opium-smokers 19 were condemned for offences against property, and only 3 for offences against the person. Opium-smokers constitute 80 per cent. of those confined in the House of Correction, Singapore, for vagrancy and police misdemeanours, but only 40, or at most 50 per cent., of those in prison for larceny, highway robbery, burglary, and other similar offences requiring boldness and enterprise. These facts have been obtained from a highly coloured and eloquent description of a demoralisation involving nearly one-fifth of a population, only semi-civilised it is true, but otherwise industrious and intelligent.* They have been confirmed by all travellers in the same region, and one of the most recent of these gives as a solution of inexplicable conduct, "True, they smoke opium, they lie without restraint, and whenever opportunity offers are dishonest, cunning, treacherous."† They differ in degree, but unfortunately not in kind, from the characteristics of our indigenous gluttons and epicures. Coleridge's untruthfulness and disregard of the duties due to himself and others were notorious. He lavished funds contributed by the generosity of friends for his own support, in purchasing his sensual gratification, and he pretended to sentiments and resolutions altogether incompatible with his conduct and degrading objects. Of those infected with the same contagion whom I have known, all except one, and he was a moderate inebriate, have been untrustworthy, especially in reference to their ruling passion; given to romancing, exaggeration, wide and wild assertions or absolute falsehood, and have plunged into debt and difficulties in defiance of prudence—even physical necessities. While I cannot accept the penitential whinings of these persons as genuine, I believe in their sufferings and recognise in the exhaustion, the prostration of mind and body, the sensation of falling to pieces, of sinking to the centre of the earth, the despair of reaching relief by any other means; as a reliable exposition of their feelings, and as the only palliation of their infatuation. I knew a domestic servant who expended the whole of her wages on laudanum; a theological and hard-working weaver who, although he did not ruin, impoverished those around by his devotion to the drug; and others, belonging even

* "On the Habitual Use of Opium." By Robert Little, Esq., Surgeon, Singapore. Abridged from *Journal of the Eastern Archipelago* for January 1848.

† Thomson, *ut supra*, p. 17.

to the affluent classes, who have stolen in order to indulge. This dulling, deadening, or extinction of the promptings and principles of conscience affords further countenance to the theory that the opiate influence, by whatever road it may travel, reaches primarily and directly, without dimming or disturbing the intellectual functions of the brain, the moral sense, the godlike attribute of our nature, and renders it expedient that such an infraction or weakening of responsibility should be recognised and estimated whenever crimes or offences against law have been committed by the habitual opium-taker. If the state of drunkenness disannuls a contract, liberating from engagements involving money or marriage, the confused and perverted notions of right and wrong in narcotic inebriation should be admitted as an element in the consideration of juries and judges.

As might have been expected, the narcotic produces very dissimilar mental disturbances in different races, although the excitement still involves chiefly the lower propensities and passions. The Malays of Malaysia, addicted to opium and betel, are described as indolent, lazy, passionate, given to gambling; but the idiosyncrasies are such as to be roused into frantic fury by the drug, displayed in that homicidal impulse and blood-thirst which has been called "running a muck."* The selfishness which narrows the mind to a single craving, reducing the personality to a sort of living Nerbudda, and benumbs our highest impulses and motives, extends to those of mixed origin, the affections of parents and children, the stirrings of ambition, and even the attractions of mirth and enjoyment. The sensation of hunger is either obliterated or deprived of its urgency and of the relish with which its suggestions are attended to, and, for long periods, opium-eaters, like dram-drinkers, seem to subsist upon their stimulus, or to live upon themselves; but, ordinarily, the appetite returns; and, although the majority appear attenuated, withered, and, unless under the immediate spell of the toxicant, haggard, yet in many, digestion, nutrition, and all the functions upon which the preservation of health depends are re-established, and the frame becomes rounded, robust, and even obese. This accommodation, or rather the compromise between a normal condition and the presence of a poison, may go on for half a lifetime, and is compatible with various routine duties, with literary, even public, labours. Perhaps the most striking illustrations of this reconciliation of the majesty and inveteracy of habit are afforded by persistence in the indulgence, in despite of the continuance of pain, and when sleep can no longer be commanded nor courted, and, lastly, by the ineradicability of the craving when it has failed

* Figuier, *The Human Race*, p. 366. London, 1872.

to realise any of the objects by which it was fostered. The reformation of De Quincey, however, and of Coleridge, who is said to have survived his compulsory abstinence twenty years, and the cure of less illustrious devotees, either abruptly or gradually, or by moral impressions, show that the fiend may be mastered. Under certain circumstances it is possible that even excess in such an indulgence may not materially shorten life, although it entails many physical ailments and infirmities, and periodic exhaustion and misery. Dr. O'Shaughnessy says that "the longevity of opium-eaters is, in many parts of the East, of proverbial notoriety.* The experience of Burnes in Lahore and McPherson in Canton corroborates this opinion, but Dr. Little feels convinced that in Singapore opium-smoking destroys life rapidly, and that through such instrumentality, and from other causes to be speedily mentioned, the population would be greatly diminished or become extinct, were it not recruited and supported by constant immigration from the mainland and other countries." Sir Robert Christison, in his most interesting monograph "On the Effects of Opium Eating," † gives a table which was misinterpreted as implying that the duration of life was not affected by the prolonged abuse of the narcotic, but he now entertains a very different opinion. An abridgment of the contents of this table must be introduced as bearing upon the psychology of the subject, so far as the duration of the life of the mind is concerned.

1. A young lady, initiated by her nurse when ten years old, took laudanum largely for fifteen years with impunity.
2. A licentious female took one drachm solid opium daily for ten years, and died of phthisis, aged 43.
3. A littérateur took nine ounces occasionally, ultimately reduced to nine drachms, and was alive when 45 years old.
4. A lady took excessive doses for twenty years; died aged 50.
5. A lady took three ounces daily for many years; remained healthy at 50.
6. A lady, aged 60, has taken the drug for twenty years, and is healthy.
7. A charwoman who took two ounces of laudanum daily died at 60.
8. A littérateur took sometimes twenty-six ounces daily, that is of laudanum three parts, alcohol one part, for 45 years; healthy at 60.
9. A lady took half an ounce of laudanum daily for nearly forty years, and was tolerably healthy at 70.
10. An old woman took four drachms of laudanum for forty years; died healthy at 80.

Besides many of whom I have received information, within the last forty years there have fallen under my own notice, for longer or shorter periods, twenty-two cases of

* *The Bengal Dispensatory and Companion to the Pharmacopœia, chiefly compiled from the works of Roxburgh, &c. &c. &c.* Calcutta, 1842.

† "Cases and Observations in Medical Jurisprudence." *Edinburgh Medical and Surgical Journal*, vol. xxxvii. p. 123.

confirmed opium indulgence. I am ignorant of the fate of two of these, six are alive, four in impaired health, fourteen have died, twelve in the meridian of life, and from causes apparently unconnected with their vice, except in two instances, which were traced to suicide or recourse to monster doses of the tincture.

Sterility and impotence are believed to be results of this practice, and to assist in the diminution of the population of Singapore; and the extinction of the reproductive propensity, and of those tendencies which lead to and preserve the social and family compact, must operate in the same direction. While there are individuals who have traced back their emancipation from habits of intoxication to opiates and hypnotics, there are many more who have sought in stimulants an adjuvant or correlative force in the production of suspended sensibility and semi-unconsciousness. It is probable that narcotism, less than alcoholism, arouses the propensities and the passions, and that it presents a greater seduction to intellectual men than to those of grosser temperament. There is a list before me of distinguished opium-eaters, including W. Wilberforce, Dean Is. Milner, the first Lord Erskine, Mr. Addington, &c. The "Confessions of an English Opium Eater" are said to have proved most suggestive and destructive to the educated class. Stimulants appear to be more potent in the enfeeblement of judgment; in lighting up the passions, and in dulling the senses, than narcotics. I have known examples of anæsthesia, of touch, taste, smell, in opiophages, and of hyperæsthesia, but more frequently of perversion of hearing and vision. In many of these the evidence of the latter state indicated delusion, or that partial delirium which is felt by all those who have taken opium as a medicine in the transition from waking to sleeping, and who fail to distinguish between external impressions and the suggestions of the partially regulated fancy. A noteworthy illustration of this fell under my own observation. A popular lecturer upon science had occasion to illustrate some proposition by a diagram, and he drew, or conceived that he drew, upon the black-board at his side the required figure. He had made a mere scratch with the chalk; but seeing distinctly in his own consciousness, subjectively, the lines which he had designed for the eyes of the spectators, he went on to demonstrate what his inner eye alone saw, revealing the condition which had been previously concealed by rapid and high-sounding declamation. If we suppose that this lecturer projected to and upon the black surface what he demonstrated and what his mental eye saw, but what no other eye could see, he had acquired by the

aid of ebriation what Goethe claimed to possess by the exercise of his will, and what those under the excitation of the Artificial Alienation of Haschisch experience, although they are fully convinced that they neither see nor hear the external impressions which impart such vividness and beauty to their conceptions. From two persons who had swallowed large doses of *Cannabis Indica*, I have received vivid pictures of their sensations: in the one a phantasm of Noel Paton's painting of "The Midsummer Night's Dream" was visible at the distance of some yards for several hours, and, subsequently, he was affected with Amnesia, forgetting the words of the Lord's prayer, and even the first section of a sentence which he was in the act of uttering. The narrator was blind. In the other, a feeling of what was described as *specific levity*, as if every step and movement would project the body into the upper air, was added. Moreau, in his monograph* on the *Cannabis Indica*, mentions illusions as to the annihilation of space and time, and the tendency to minimise external objects, as characteristic of its operations. The revelations of Mahomet must have been, as the dreams and delusions of the Assassins certainly were, inspired by haschisch.

It is opportune here to direct attention to the continuance or immutability of the purely psychical creations of opiophages. Notwithstanding the apparently kaleidoscopic changes in the images presented to De Quincey, there was an interminable succession of the same temples, Malay faces, and so on; and we have encountered more obscure observers who were incessantly haunted by an opening door and going into a street on a winter's night; who for years were about to leave by a coach, and to go up for a University examination; and who ever saw the same motto or sign inscribed upon the same portico. This stationariness or immobility of idea may be an analogue of, or in correlation with, that concentration upon a single series of sensations of mere passive physical enjoyment, and of that muscular inactivity or indisposition to movement, which constitute the Elysium of those who depend for happiness upon the drug. It is certain that rest, repose, reverie, constitute the Utopia which is desired and sometimes secured. It is equally certain that the stability of position, the horizontality, and the suspension of muscular action which are thus produced and encouraged, are often followed by diseases and disturbances of mobility. Almost all opiophages, even the wretched pauper who craves an eleemosynary draught at the counter of the apothecary, are subject to tremors. Coleridge, when he visited Miss Hannah More, could not, when

* *Du Haschisch et de l'Aliénation Mentale.*

unassisted, carry a glass of wine to his lips, and yet he was at the same time lecturing to large audiences, and in strains of great eloquence, in Bristol. Of those who have come under my own care or knowledge, a very large proportion have lost control of the muscles, three have had epileptiform attacks, two were paralysed in one arm, and all, with one exception, had an unsteady and ill-balanced gait. It may be that these phenomena are all symptoms of the impaired or impotent volition which has been previously alluded to, whether the will be ineffectively applied to a change of purpose or a change of position, to the abandonment of a habit, or to the commencement of new instincts and actions; but it is, at all events, evident that they are abnormal, independent of physical changes, for De Quincey, Coleridge, and certain others with whom we have come more immediately into contact, have reformed, and that they occur independently altogether of mental diseases and distempers strictly so called. A distinguished author has claimed for opium, in addition to its physiological effects, that, when somnolency is warded off, the faculties become clear, the ideas brilliant, precise, and under control, the power of application more intense, the conversational energies improved, and the muscular movements facilitated. All these are the indications which follow renovated energy, an abundant meal, a moderate quantity of generous wine, or joyous and enlivening company, and there is inexpugnable proof that such manifestations are never called forth in the hebeté, the stupid, the illiterate, and the taciturn. Were there any evidence of a continued excitement or tax upon the intellectual powers, or of deep-seated agitation of the emotions, in place of a mechanical exercise and monotony of these, we might expect, conceiving always the supposed enormous breadth of opium consumption, that it would assume the foremost rank among the causes of insanity and imbecility; yet, of about 10,000 inmates of asylums of the etiology of whose mental disturbance reliable information could be obtained, not above four can be traced to such an origin. A superintendent of a large institution has written to me that he never knew an instance of any mental affection which could be referred specifically to narcotism. In my own practice, of the twenty-two cases before cited, five were committed to asylums, two voluntarily, in order to escape temptation, one as labouring under dipsomania, being then addicted to brandy, one as the victim of dormant moral insanity, complicated with paralysis of one arm, and one as maniacal following a convulsive attack; but, with these exceptions, I cannot recall the history of a single patient who, either wittingly or involuntarily, had been deprived of reason by opium.

It is consistent with the scope of this enquiry to insist upon facts which are incidentally adverted to in the preceding pages.

1. The pain, which is assuaged by the local application of opium, is not a mere exaltation of the sensation of touch, as neuralgia, heat, and the prick of a needle appear to be all transmitted along the same nerve and nearly at the same time ; cannot be placed in the same category as hardness, weight, &c. ; and is not, in relation to consciousness, more an external sensation than the grief or remorse which are mitigated by the same means. 2. That the power of opium to suspend or permanently to enfeeble volition and conscience cannot be fairly referred to its agency upon the cerebral structure, or upon any localised psychical power. 3. That the suspension or enfeeblement of these conditions, and of the propensities and affections, while the intellectual capacities remain unimpaired, indicates the existence of a plurality of mental faculties, independent in their action, scope, and durability.—If the juice of the poppy can gradually alter or subvert our moral nature, apart altogether from disease or delirium, there must be a more intimate relation between the Anodyne and Sensibility and Consciousness than between these and Cerebral Substance, with which other facts appear to show that they are connected.

ART. IV.—WILL AND VOLITION.

BY W. H. O. SANKEY, M.D. LOND., F.R.C.P.

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JUDGING from the somewhat recent publication of Dr. Carpenter's work on Mental Physiology, it would appear that there exists a very unsettled state of opinion still upon the subject of "Will and Volition," especially, perhaps, among the pure physiologists. Yet there is, probably, no portion of psychology of more interest; for our observations must be largely based upon the voluntary actions of others in the objective study of psychology. No part of mental philosophy either has a wider practical bearing, since as connected with it must be included the doctrines of free-will and necessity, of responsibility and criminality, besides that of self-control, of impulsive insanity, &c.

That much difficulty surrounds the subject is admitted on all sides. "How comes it, to what fatality is it owing," writes Professor Bain, "that an enormous theoretical difficulty, a metaphysical dead-lock, a puzzle and a paradox of the first degree, an inextricable knot, should have been constituted in understanding this subject?"

Those among the English writers, and who now perhaps constitute the larger proportion, who accept the doctrines of the Positive philosophy agree very closely in their explanation of the phenomena connected with will; but there are still, it seems, many who dissent from them.

We find two views upon the question chiefly prevalent. Dr. Carpenter, in the work above mentioned, directs attention to them, preparatory to entering upon the difficulties which he himself experiences in the subject. "The mental relations of mind and body," he says, "should always be considered together; and it is to the neglect of this precaution that such fallacies, discernible in the arguments brought forward, are due in the oft-repeated controversies between the advocates of the materialistic and the spiritualistic hypotheses."

The materialistic doctrines of Dr. Carpenter are those which are considered to be the received views of the Positive school of philosophy, and an enunciation of them may be found in any of the modern English writers of that school. Dr. Carpenter gives the following description of them:—"The most thorough-going expression of this doctrine will be found in the 'Letters on the Laws of Man's Nature and Development,' by Henry G. Atkinson and Harriet Martineau. A few extracts will suffice

to show the character of this system of philosophy. 'Instinct, passion, thought, &c., are effects of organised substances.' 'All causes are material causes.' 'In material conditions I find the origin of all religions, all philosophies, all opinions, all virtues, all spiritual conditions and influences,' 'in the same manner that I find the origin of all diseases and of all insanities in material conditions and causes.' 'I am what I am, a creature of necessity; I claim neither merit nor demerit.' 'I feel that I am as completely the result of my nature, and impelled to do what I do, as the needle to point to the north, or the puppet to move according as the string is pulled.' 'I cannot alter my will, or be other than what I am, and cannot deserve either reward or punishment.' "

"It seems to me," says Dr. Carpenter, in commenting on the above extracts, "that every system of philosophy which regards the succession of mental phenomena as determined *solely* by the ordinary laws of physical causation, and which rejects the *self-determining* power of the will (or, which is the same thing, regards the will as only another expression for the *preponderance of motives* or as the *general resultant* of the action of the physiological mechanism), virtually leads to the same conclusion."

In this latter paragraph Dr. Carpenter offers no argument, but enters his protest against the doctrines stated, this protest "arising out of an *involuntary repugnance* felt."

Dr. Carpenter, after mentioning some of the difficulties which occur to him, which need not be here repeated, concludes by saying that the materialistic philosopher places himself in complete antagonism to the positive conviction felt by every right-minded man, "that *he really does possess a self-determining power*"; and then quotes Archbishop Manning, with whom he says he entirely agrees on this point, viz.: "That we have exactly the same evidence of the existence of this self-determining power within ourselves that we have of the existence of a material world outside ourselves. For, however intimate may be the correlation between mind and brain" (and Archbishop Manning seems disposed, adds Dr. C., to go as far as himself in recognising this intimacy) "there is still another faculty, and, more than this, another agent, distinct from the thinking brain." . . . "That we are conscious of thought and will is a fact of the internal experience of all men." And Dr. Manning concludes by quoting Dr. Carpenter: "That the common-sense decision of mankind in regard to the existence of an external world is practically worth more than all the arguments of the logicians who have discussed the basis of our belief."

This objection should have its due weight. According to Rule II. of Mr. Lewes' "Rules of Philosophising," "Any contradiction of fundamental experience of science or intuition is to be taken as evidence of some flaw either in the data or the calculation." The point raised may, however, be deferred for the present. One may also note that the fact of two authorities cited agreeing in the denunciation of the doctrines of the Positivist school of philosophy is not without its significance, for the dissentients probably do not argue from a common point of view. Before examining the grounds of their "repugnance," it may be as well to glean the views of the more recent writers of the school from their own writings. They are given by Mr. Herbert Spencer concisely in his "Principles of Psychology," vol. i. p. 495, 2nd edition.

According to this school, "Will" is an abstract term, and not "a distinct faculty or another agent distinct from the thinking brain." A voluntary act does not differ, as regards the mechanism by which it is performed, from those acts which are performed automatically. And we know, in fact, that identical movements are performed in somnambulism and in disease without the least evidence of the presence of consciousness, and it may be presumed that no volition can occur unconsciously. Again, it is known that those automatic movements which are eventually and distinctly of that character have become so by insensible gradations from the most well-marked volitional actions; and many automatic actions pass by equally insensible degrees from instinctive, and these from the simplest reflex movements, so that no distinction can be established between any actions. It is evident, therefore, that the will, if it is a distinct faculty, may be sometimes absent entirely, sometimes partially, or may exert its influence, if it is an agent, sometimes strongly, sometimes feebly, without affecting the result.

Spencer says: "Between the reception of certain impressions and the performance of certain appropriate motions there is some inner connection. If the inner connection is organised, the action is of the reflex order, either simple or compound; and none of the phenomena of consciousness exist. If the inner connection is not organised, then the psychological changes which come between the impressions and motions are conscious ones; the entire action must have all the essential elements of a conscious action—must simultaneously exhibit memory, reason, feeling, and will; for there can be no conscious adjustment of an inner to an outer relation without all these being involved."

Positivists maintain that a motion may occur more directly or less directly from its excitant; admitting, as they do, that reflex movements resulting in direct response to the excitant,

and in which case the connection between the cause and effect is organic, or, at all events, not assisted by the intervention of any agent like "will," they hold that, in other resultant actions, the organic connection may be not so direct, but pass, as it were, through a chain, each link of which may be either entirely unfelt, partially felt, or completely felt; that at each link the explosion into a muscular movement may be checked by a counter-excitant; that, consequently, instead of an action taking place, the motor changes become "nascent" or are suppressed. "When, after the reception of one or more complex impressions, the appropriate motor changes become nascent, but are prevented from passing into immediate action by the antagonism of certain other nascent motor changes, appropriate to some nearly allied impression, there is constituted a state of consciousness which, when it finally issues in action, displays what we term volition. Each set of nascent motor changes arising in the course of this conflict is a weak revival of the state of consciousness which accompany such motor changes when actually performed—is a representation of such motor changes as were before executed under like circumstances—is an idea of such motor changes. We have, therefore, a conflict between two sets of ideal motor changes, which severally tried to become real, and one of which eventually does become real; and this passing of an ideal motor change into a real one we distinguish as 'will.' "*"

"Will," according to this doctrine, is a state of mind, not an agent; the consciousness of the conflict that passes finds its recognition in the word "choice." As Mr. Spencer elsewhere says, it is quite true that man has a choice, for the consciousness of the "conflict," as he calls it, between the motives or inducements to do or to forbear are the outcome of former stored impressions that are called up by association. He goes on to explain that it is quite as true that there is a choice of motive, and the man chooses because at the time of the volition the mental processes, the conflict, &c., constitute the man's mental self.

This statement, and which in justice perhaps should be read *in extenso* by any one not fully cognisant of the views, is somewhat different in character from that extracted from Miss Martineau and Mr. Atkinson, yet it does not absolutely contradict them. Their view is equivalent to saying that, given, a certain individual of a given character (having, that is, certain inclinations, experiences, principles, &c.), and place him in a given position, and a certain or necessary conduct would result. The argument of Positive philosophers is that such is truly the

* Vol. i. p. 496.

case, and that to question it would be to question the order of nature; they admit at the same time that the experiment would be almost an impossible one, on account of the diversities in the characters of different individuals. There is no doubt that an approximate calculation, however, can be made and is daily made of what the result would be on the juxtaposition of two individuals, or from the position of different individuals in given circumstances; such an estimate is hourly made by nearly every one of his associates in every kind of society; such calculations enter into every dealing or intercourse between men.

But one of the chief objections which the opposite class of thinkers bring against the doctrine is, that it implies that man placed in a certain position must of *necessity* act in a certain manner; that, therefore, he is not a free agent, and not being a free agent, is, of course, not a responsible one; and from the quotations which Dr. Carpenter brings from Miss Martineau and Mr. Atkinson, it would seem that they, and those who think with them in this controversy, really hold this view.

The word "necessity" has been objected to, and Professor Bain writes: "I very much doubt whether the word ought to be retained in any of the sciences, physical or moral; nothing is ever gained by it. I consider the word 'necessity' as nothing short of an incumbrance in the sciences of the present day."* There is a certain ambiguity, at least, in its meaning: at one time it expresses "negation of freedom," and at another time it implies "a want or need." In most discussions connected with the subject of will, it is used to signify the absoluteness of the dependence of a given effect upon a certain cause. That, for example, on the conjunction of two agents, a certain effect will "necessarily" follow; that two added to two gives a quotient of four; that sugar placed in water will be dissolved, &c. In this sense it is that a result is said to be necessary in science generally. There is no difficulty or doubt, however, concerning the sense in which the word is used in this controversy, for the very essence of the doctrine of necessity (a doctrine which has been warmly discussed in all ages) depends upon its signification of absolute connection between cause and effect.

Necessity and free-will, of course, are parts of the same subject. Here is a passage from Spinoza, as quoted by Dr. Maudsley: "Men deceive themselves in this point, that they believe themselves free. For in what does such an idea consist? In this only, that they are conscious of their actions, but are ignorant of the causes which determine them." . . .

* *Emotion and the Will*, p. 549.

“Those who fondly think they act with free-will dream with their eyes open.”*

“If the will is free,” wrote Cicero, “then Fate does not rule everything; if Fate does not rule everything, then the order of all causes is not certain, and the order of things is no longer certain in the foreknowledge of God.”

Perhaps the greatest objection to the opposite doctrine, the doctrine of necessity, has come from the theologians, on account of its supposed abrogation of responsibility; but the doctrine of entire freedom of will would appear to be equally if not more dangerous to morality or Christianity. If a man could at any moment change the evil tenor of his life at will, he might argue that it would be wise to indulge in the pleasures of an evil course, often so much pleasanter to youth than a life of self-denial, since when he was old he could readily turn from his evil courses.

Again, if men could act entirely by caprice, or were actuated only by any transient impression, how would government be possible? How could the discipline of an army be ensured? So that if the doctrine of the Necessarian is objected to on account of its favouring fatalistic notions, it cannot be said that free-will is altogether free from difficulties. Most men would rather be under the dominance of fixed and immutable rules, than trust to unfixed and unstable laws.

The points mentioned by Dr. Carpenter as forming the ground for dissent to the doctrine of will, as advanced by the Positive school, and which were deferred, were, that this explanation of the phenomena of will implied absence of responsibility, and that the doctrine simply examined or observed by the same faculties which convince us of the reality of objects around us appeared to be *repugnant* to common sense and to every one's natural convictions and beliefs. It may be conceded that much of the doctrine, as he quotes it, and considers it expounded by the Positive school, runs counter to most people's belief and common sense. We are all, every one must confess, conscious of possessing a power of choice; this is as evident to us as that we can see or feel. Professor Bain gives the example in illustration of a common proceeding in shopping. When a person purchases one article out of several submitted to his view, the recommendations of a particular article are found to be greater than those of the rest, and the purchase is concluded by the selection of it. It may happen that for a moment the opposing attractions of some two articles are exactly balanced, and decision may be for a time suspended, but eventually the choice is made. Every one is conscious that such choice was made voluntarily and by himself, or, as it is called,

* *Physiology and Pathology of Mind*, p. 116.

of his own free will. But the example is open to explanation by both views, according to each person's convictions. The advocates of free-will quote it as a proof of the free-will of the purchaser in his selection. According to this hypothesis the free-will, as an *agent*, interposed and decided the transaction. The other hypothesis, to which the name of the "Necessarian" is applied, would explain the transaction in the following way. While the purchaser was examining the goods, their advantages or disadvantages were severally presented to his observation or senses; at one time, perhaps, preponderating in favour of A, at another time in favour of B, keeping the balance oscillating for awhile, until the advantages of one completely outweighed those of the other, and conviction resulted, and immediately on this, of necessity, an action completed by the purchase. To this it will be objected, where is the proof of a necessity? The purchaser might have been convinced that A was better or cheaper than B, yet out of perversity have bought B. Assuredly. But then in such cases there would have been placed in the scale with B the desire to do an eccentric or perverse act; a motive of some sort, according to the explanation of the Positivists, who do not deny the influence of perverse incentive to action.

The difficulty in understanding the question often made by common minds is owing to the fact that they leave out the last incentive or motive. It is like that common trick played by young people, of dividing the wishing-bone of a chicken, when the promise is held out that he or she to whom falls the greater half shall have whatever is their last wish. One wishes, perhaps, a hawk; another a hand-saw; and assuredly that one who obtains the greater piece of bone has the last wish of his mind, for to gain his first object he wished for his last. So in a volitional act it is the last choice, and last choice only, which excites the act of volition, though that last act is the resultant of many previous motives, and any one act extends over only one increment of time.

If the above be a satisfactory explanation of the phenomena, there yet remains the feeling of repugnance to which Dr. Carpenter refers, and in which he says Archbishop Manning concurs, which must be considered. They say that this enunciation of the law is repugnant to the common-sense convictions of men in general. In many arguments such a vague feeling might be considered inadmissible as evidence, but in the present question it may be allowed to have weight, since it is to the convictions produced through the ordinary channels by which the question at issue must be ultimately decided. It is to the evidence of sense to which they appeal. "We have exactly the same evidence of the existence of a self-determining power

within ourselves," they say, "that we have of the existence of a material world outside us."

It is certainly true that the sense of a determining power is felt, and it is equally true that it is felt to be intimately connected with self (or the Ego), while it seems equally clear that the phenomena of volition and voluntary act are truly and satisfactorily explained by the Positive philosophers.

Since the explanations are diametrically opposite, it is obvious there must be an error somewhere, and it appears to my mind that it is in the logic: the propositions, as enunciated by the opposite parties, are not identical.

The question submitted is the following: What occurs in a voluntary act? Both parties will agree that the result or act is due to the reaction between the individual and an excitant. In other words, that the result would not occur without some motive, whether this be an internal or external excitant, whether it be an object of danger to be avoided, or an internal desire or wish to act. At all events, there must always be some reason or incentive to perform a volition.

This being admitted on both parts, the problem is reduced to an enquiry into the nature of the reaction between the external excitant and the individual, which, for the sake of brevity, we will call the "Ego." One view (A) is that, given a particular Ego, acted upon by a particular excitant; a certain and predicable result will follow—or, some would put it, would necessarily follow. The other view (B) is, that the result would not be certain or necessary or predicable, but, on the contrary, variable—that when the Ego was acted upon by an excitant, the result would be determined by an intervening power, called Will, and that experience and common sense prove it.

The error, in my opinion, lies in this, that the Ego, as understood by the two parties, is not the same—is not a fixed term. The premises of the propositions are thus not identical.

The Ego as used in the first proposition A is a concrete term; it is limited in its use to a single increment of time; while the Ego in the second proposition B is a general or abstract term, and is not limited to time. On the contrary, the signification of Ego, as used by Dr. Carpenter in his arguments, is a general notion, abstracted from the continuous existence of the idea of self from childhood to manhood. Personal identity is a similar general idea. We believe that we are the same individual, through the whole stages of life, though the body has grown, and though we believe we have changed its material over and over again. We have the conviction, from the evidence of sense, that the Ego is the same. When we speak of the Ego in this signification, we must view it as modified by

a life's experience, as the receptacle and storehouse of an infinity of influences, some even of hereditary origin, but we make use of the term perfectly legitimately, as expressing a general idea. When we put the same proposition with this understanding, it is obvious that we are not arguing on the same terms as when the term means simply the person at one point of time only.

In this or second case B the reaction, too, is not only between a general or abstract idea of the Ego, but the action is considered as extending through an indefinite time, and therefore reacting upon a varying state of the environments, or upon a more or less general view of the circumstance in which the Ego was placed. The conclusion is therefore evolved only in an abstract or general form.

By a very easy transition, such a review of a man's voluntary powers leads to the abstract notions of power and the other attributes claimed for the "will." In reviewing the phenomena in this general way, since the general idea must be formed upon the particular or concrete act of volition, it will be readily perceived that in the reaction of the Ego and its environments the former is active and the latter usually passive, and the general idea of the Ego becomes connected with the attribute of activity. Hence it is readily conceived to be not only an agent, but the determining agent,* in all volitional acts, and, as it would appear, as readily and as a natural consequence. The next step appears to be to exalt the idea thus abstracted into an entity, and we meet with such expressions as "Coughing can be excited by the mandate of the will"; another, "The strongest exertion of the will is powerless to prevent"; "The power of the will over the muscles;" "In these cases the will does not struggle against a foreign impulse;" &c.

The hypothesis of a separate determining agent is at least unnecessary, since the facts are as readily accounted for without it, and Newton lays down the law that we should admit no more causes of natural things than such as are both true and sufficient to explain the appearances.

It would appear, in fine, that the differences and the difficulties of the metaphysical hypothesis concerning the will are due to the fact that their result is drawn from an abstract and general view of the phenomena, whereas the hypothesis of the Positive school is based upon observation of the phenomena in the concrete.

It has been supposed that the metaphysical (or, as Dr. Car-

* "It is the abstraction from the particular volitions which metaphysicians personify as Will, and regard as their determining agent."—Dr. Maudsley, *Body and Mind*, p. 22.

penter writes, the spiritualistic) explanation alone would account for responsibility and choice of action.

But is there anything in the Positivist's explanation which negatives choice, or freedom to choose, or responsibility? For these are the points which form the ground for the repugnance, and are the attributes which are said to be as evident to the experiences as the existence of an external world.

It is clear that it is quite as legitimate to form an abstract and general idea of self as of any other concrete notion. A concrete idea of self is necessarily limited by a single increment of time, for directly we spread our existence over any sensible duration in time the Ego is modified. In reviewing any single act of volition thus limited we find in it, by the very means appealed to by the spiritualistic school, viz. by our internal sensation, an element of choice, for we cannot allow that act of the will is contrary to our choice; and the Positivist school admit the same, only explaining the word "choice" to be the balance of inclinations in one or other way; if the spiritualistic would make choice independent of such balance, and entirely unconnected with will, except as a constant concomitant, it follows that both agree that the concrete volition is always accompanied by choice; and hence the general idea which is the outcome of the concrete must also contain the attribute of choice.

The abstract or general idea of choice, or, what is its equivalent, the idea of a general power of selection, gives the general abstract idea of "Free Will." But such general concepts cannot yield an absolute, but only a contingent result; and this is all that experience warrants in this case. And no man's common sense or conviction can make him believe that he has absolute freedom or free-will. It is not true that our convictions prompt us to believe that we could by our will pervert any natural law; all that they convince us is, that we have a certain range, a comparative freedom to act, according to our organism and our surroundings.

If the Positivist's theory, as admitted, gives but a comparative or modified freedom, in what does this differ from the opposite, which is, We are free, therefore responsible: this is freedom with drawbacks, and therefore not an absolute freedom? If there is no absolute freedom, how can there be an absolute responsibility: so that one hypothesis is not better in this respect than its fellow. The truth is, the idea of responsibility is a legitimate concept from experience, and in no way militates against the Positive view of psychology. That certain actions are accompanied by pain is a concrete fact, from which the general concept of responsibility naturally follows.

The main difficulty, however, in the understanding of the theory of Will is the tendency still extant in the minds of many to metaphysical doctrines. These doctrines had a deep hold of the general reader; they were intimately incorporated into all kinds of literature for a long period, and the effects are still discoverable in the débris which occasionally turn up. Those of this school, it is true, usurped the name of "Spiritualist," yet no materialists were more wedded to matter than many of them. No error is more common still than the embodying of an abstract idea in a real and substantial person. "Having once detached an aspect, and considered it apart, the mind is prone to assign an objective reality to this separated aspect. . . . The danger is slight, with abstractions of the first degree. Probably no one ever personified whiteness—as virtue and nature have been personified—though we remember that boundary had its god Terminus—marriage its god Hymen, &c."*

The idea "will" has been thus personified, and has been in that form allowed to tyrannise over the intelligence. Will has been compared to the engine-driver, and the locomotive to his body. The engine-driver Will is able to move or stop the engine as he likes. The simile may be good, to a certain extent, but it cannot be admitted that the analogy is complete in all its details, nor can it give a separate existence to the Will apart from the engine. A simile is a legitimate method for explaining a process, but it proves nothing, and this simile or metaphor will give no more warrant for the idea that the Will is separate from the body and bodily functions, than that it can step down from its engine to perform other functions; and if we give this independent power to Will, we must assign the same to Digestion, or Growth, Life, &c.; or if it is intended to signify that this power is what is called the "Soul," and which probably is the view of many, this would be nothing more than changing the title, and the same arguments would apply that have been used to the faculty, under the title of the "Will."

* Lewes, *Problems of Life and Mind*, p. 278.

ART. V.—RELIGIOUS INSANITY METAPHYSICALLY CONSIDERED.

Being an Address delivered by the Editor before the Medical Society of London,
January 25, 1875.

MR. PRESIDENT AND GENTLEMEN,—

It is my intention this evening to place before you some of the chief characteristics met with in religious insanity. The subject is a most important one, and it is impossible to do justice to it in the time allotted; however, I have endeavoured to select some of its salient points. I propose to treat the subject metaphysically, and shall briefly consider its nature, symptoms, diathesis, special features, complexity, and causes—social, intellectual, and moral.

The world presents itself before us in a twofold aspect of health and disease—the sound and the unsound, both of body and mind. We are living, moving, and acting in the midst of this twofold world, which imparts to the scene around us both its grandeur and defects. The moving panorama appears in varied lights and shades to different eyes. The statesman views it from an elevated point of his own; the man of business and the man of pleasure each of them look at it from his own standpoint, and through his own particular medium. But the psychologist sees it in its double aspect—the healthy and the diseased, the sane and the insane; and discerns in these two aspects the constituent elements of our daily existence.

Religious madness is by no means peculiar to modern times or to civilised periods. It has been recognised as a particular form of insanity from the earliest periods of the world. In ages of ignorance it was regarded as a divine inspiration or *flatus*.

It is the most formidable species of insanity there is; and though it is said to leave the rest of the mental faculties untouched, yet we can scarcely trust the integrity of the mind that labours under its delusions.

By some it is supposed to be nothing more than an exaggerated sentiment of religion; and that the person under its influence may, by a sufficient effort of the will, overcome and subdue it. It cannot, however, be regarded as a mere mental emotion to be cherished or discarded at pleasure. No particular disease can be justly said to give rise to it, but it is more than probable that the perverted sentiment of religion provokes

some bodily ailment, by its morbid action on the nervous system.

The infatuation usually shows itself by running aground on some of the truths or data acknowledged by all the world. The mind fixes upon a well-known truth, and exaggerates its importance to the exclusion of everything else. The idea enlarges, and at length becomes gigantic; it grows and increases; it has no context and admits of no relationship with any other truth; it stands alone—it is a monomania. The person so possessed is a dangerous lunatic.

At its first accession it is scarcely discernible; very frequently it is not so much as suspected by those in immediate contact with it, for in its early stages it is withdrawn from sight by cunning and reserve.

At various periods of our history religious insanity prevailed very widely as an epidemic, and extended over large portions of the universe. This mental enthusiasm was usually introduced by a particular mind of great energy, exercising its influence over other minds, that one mind being only the exponent of other minds of that particular epoch.

During the 15th and 16th centuries large numbers of persons were dealt with by law who at that time were living and acting under the influence of a religious epidemic.

In the reign of Francis I., 1515–47, ten thousand persons were either killed or punished whilst under these religious fanaticisms. The victims of these public persecutions belonged to different grades of society. The individuals selected were chiefly wretched old women, whose ugliness and eccentricities rendered them remarkable, and who were usually members of some of the convents. Large masses of females were submitted to the austerities of these abodes, and consequently suffered from perverted religious ideas, and were attacked with hysterical symptoms. They gloried in the profanation of the religion they had sworn to observe, and also in their professed intercourse with supernatural and diabolical agencies. Incantation was the remedy resorted to: priests and bishops devoted days and nights to the employment of every known mode of expulsion; but instead of any good resulting from their interference, the disease, on the other hand, became contagious in the convent, and frequently epidemic in the neighbourhood, months, even years, elapsing before tranquillity was restored.

These women, who had hitherto lived irreproachably, confessed, whilst under the influence of these paroxysms, to having perpetrated the greatest atrocities and enormities, and they did not hesitate to accuse their dearest relatives and friends

as being the principal actors and originators of these crimes. Many of these poor victims were burned, and hundreds perished in consequence of their own morbid religious ideas. It frequently happened that those who were falsely accused, and excited by the religious ceremonies to which they were subjected, eventually acknowledged all the atrocities attributed to them, and even the priests themselves, though at first firmly ignoring these imaginary delusions, ultimately became the victims of these morbid ideas, and were, so to speak, epidemically seized.

After the suppression, at the time of the Reformation, of what were then called the religious houses, the insane became a wandering body, and were permitted to wander, uncared for by their relatives, about the country naked, and frequently exposed to various forms of insult and degradation. The term "Abraham-men" was universally given to lunatics, who depended upon the charity of others for their livelihood. They pretended to be insensible to all sensation of pain, and allowed various experiments to be made in proof of their being thus destitute of bodily anguish. A writer living in those times alleged that "their skin was quite benumbed, and that they did not feel any inconvenience from punctures, blisters, or setons."

Decker, in the "Bellman of London," alludes to the beggars of his time, who imitated the "Abraham-men," in order to excite public sympathy and so extort money.

It is impossible to read the history of the irregular and turbulent conduct, or of the groundless and absurd expectations of most fanatics, without concluding that while some were merely designing and wicked, others were actually influenced either by a temporary or a permanent insanity; and it will appear the less wonderful that so many should become insane at the same time, by a kind of epidemical contagion, when we reflect on the influence of example and of any favourite and popular notion in exciting the wildest and most outrageous extravagancies of a misguided mob; if we consider how apt the brain is to be affected by a constant attention to one subject, and how liable such attention is to be excited, when the subject is of a religious nature, and is regarded with emotion and ardour.

A person whose religious education has been imperfect or neglected, and whose temperament is highly susceptible, is suddenly afflicted with some domestic grief. For the first time his eyes are opened to the vanity of life; his heart is softened; he is directed by a pious friend to seek consolation in religion; his conscience is awakened, and he is distressed by the dis-

covery of his own sinfulness and shortcomings; grief and remorse subdue him. The subject is all engrossing; he reads, and meditates. Sin stands before him like a giant; this life is now to him as nothing—the next is everything; hell gapes at his feet, and he sinks into a fit of despair and gloom. The conscience once being alarmed becomes morbidly sensitive, and the new convert begins the work of godly reformation by abjuring amusement as a sin, and the world as a snare. He shrinks with the greatest horror from all former habits, friends, and associations; grows taciturn and morose; and withdrawing more and more from society, finds himself shunned, in just proportion as he deliberately shuns others.

The understanding is weakened and led astray by religious fervour and excitement, when ill-directed and unreasonably made use of, and this may terminate in insanity of a most obstinate character. It is difficult at first to fix upon any one isolated fact which is of itself conclusive of a wandering mind; the symptoms are negative rather than positive; it is retirement rather than overtact. Besides, the popular notions are so vague upon the subject of religion, that the world is prone to mistake religious eccentricities for true religion.

The first deviation of the mind from sober reason towards religious insanity is so like an earnest and truthful warmth of feeling on this all-important theme that we are very likely to be deceived by its ingress, and thus incautiously suffer the enemy to steal a long march upon us before we are conscious of its proximity. It is only possible to arrive at a certain conclusion respecting it by remarking attentively the ordinary behaviour of the religious enthusiast. If the religious fervour tends to render the behaviour and motives of conduct more circumspect, sober, and correct than they have hitherto been, we must conclude that it is not insanity; but if, on the contrary, it seizes hold of new ideas, and gives way to eccentric manner or speech, we are wont to suspect the approach of mental disorder. But even in this case it may be nothing more than a passing enthusiasm, a transient paroxysm, and the excitement of the brain passes away without leaving any of its traces behind. But if hallucinations be evinced, then there can be no doubt as to the nature of the case, for there is scarcely any form of religious insanity devoid of hallucinations, spectral illusions, preternatural voices, and special revelations, even in the very incipient stages.

The patient, in the midst of imaginary felicity, fancying himself rich, handsome, and dwelling in a palace, is troubled with mournful thoughts. This state is followed by hallucinations arising in connection with some painful circumstance in

his past life. At this conjuncture nothing is more remarkable than the abnormal sentiments and religious ideas which occur suddenly in persons not usually religious. A lunatic with exalted mania swears and blasphemes without the least respect for what is holy. After he has been in this state for some time, his condition is changed; he becomes calm, sober, and sorrowful; he speaks of his sins, of divine mercy, of hell, of the relation between his malady and religion.

Religious insanity very rarely occurs suddenly. It is a disease, as I have before observed, of slow growth, but of persistent and formidable pertinacity. It incubates, or begins with sullenness, moroseness, enthusiastic piety, and slight eccentricities of, at first, an unnoticeable and pardonable description. The patient evinces keen instinctive feelings, and often betrays an almost unaccountable servility, cowardice, or precipitation upon unexpected occasions; this nervousness most probably arising from a strong, though morbid, desire of self-preservation from the fear of hell, both on his own account and those in whom he is interested.

In the early stages of religious insanity a kind of mysterious reserve is maintained, but after a time, and in proportion as this form of peculiar mental aberration *matures*, the patient seeks to force his sentiments on others; and if his notions are questioned or rebutted, he resents such reception of them as a personal insult. From conversation he proceeds to preaching and exhortation, often affecting a miraculous conversion. At times he becomes the subject of ecstatic fears, and gives way to extravagancies of speech and behaviour; the ideas chase each other rapidly through the mind; but after a time this rapidity ceases, and the ideas become irregular and involuntary, and disease of the brain is surely progressing; there may be indications of softening, atrophy, or inflammation. The conjunctiva is jaundiced, the liver deranged, the decarbonisation of the blood is impeded, the respiration oppressed, the right side of the heart overloaded, and cerebral congestion results.

The conscience becomes timid, and is beset with scruples. Dangerous ideas next occupy the patient's mind, relating to suicide, homicide, infanticide, or pyromania. As the disease progresses the ideas become very much confused; he is restless at night, sleepless, and during the day is in a state of excessive excitement; at the same time a notable change is observed in his dispositions and manners; his appetite becomes abnormal, his person neglected, and he is unable to fix his restless thoughts even momentarily on worldly affairs, however urgent they may be; even domestic ties and affection seem to lose their hold upon him, an utter indifference being evinced for what goes on

around him. In this stage he is undoubtedly the victim of partial insanity; reason has not its fair play; it is not gone; it is not even impoverished, if you can but once break the charm—a work of more than ordinary difficulty, for he is spell-bound by his own conscience. He will be rational enough, and converse upon any other subject with his customary sense and judgment, but only touch the tender chord of religion, and his rationality takes flight, leaving him insane or foolish.

As the disease progresses the mental depression increases; he cannot rouse himself from his torpid state of mind, refusing to converse upon any subject except his imaginary wickedness. The delusions chiefly tormenting the patient have reference to his former life or business, and one of the most prominent morbid ideas connected with religious insanity is that “the unpardonable sin” has been committed, and that the victim of this delusion is forsaken by God. The unhappy believer in this sad delusion is generally reduced to the utmost extremity of despondency and despair.

A wonderful singularity is usually met with in the symptoms associated with this variety of mental unsoundness, and it is my intention, as an illustration of my subject, to give an exact description of the symptoms, as given to me *verbatim* from the lips of a patient I have recently seen. I quote the patient’s own words:

“I am the unhappiest man in the whole earth; my life is the gall of bitterness and bond of iniquity. I feel to be under God’s condemnation. I have no comfort in rising up or sitting down, in going out or in coming in. I cannot eat without condemnation. I desire to eat and to drink to satisfy the cravings of nature, but when I partake of God’s good creatures I feel it is without God’s blessing. I desire God’s blessing beyond all expression, for it is that only which maketh rich, and addeth no sorrow with it. I feel my life has been a failure, that my works have not been perfect before God; all men have spoken well of me, as they did of the false prophets; I have been as much deceived myself as others have been deceived in me. With God actions are weighed, and He will bring every work into judgment, and every secret thought, whether it be good or evil.

“I have been greatly troubled and perplexed in my mind for the past four or five months; difficulties have increased; at first there were temporal losses, but not to such an extent as in ordinary circumstances would have occasioned solicitude; then my mind and spirits were disturbed—I began to predict loss and ruin. For a long time religion has been declining in my soul. I used very highly to prize the Sabbaths, but for the past nine or ten Sabbaths I have not been able, something within has made it in a way impossible to go to God’s house, although I would desire His blessing. I have not been able to obtain it; God seems to have laid open to me all my heart and all my life. His

promises I can't lay hold of; I fear His dreadful threatenings. I fear God has forsaken me. I have thought all my life long that I sincerely loved my Saviour, and desired to serve Him. There seem to have been two principles striving and working in me: I thought the good was the prevailing one, but I have been deceived. I try to pray, and at times I seem to be able to pray. This world seems to be all in confusion, everything contradictory, men walking in a vain show and disquieting themselves in vain. I feel that I have been a slothful servant, and that I am doomed to everlasting perdition."

This patient is now in a state of acute mania, and has to be fed mechanically.

The general appearance of a patient when the disease has progressed is characteristic of the mental unsoundness from which he is suffering. He has an anxious expression of countenance, the face is worn, haggard, and pale, and wears a constant frown. He is restless, and appears to be in a most pitiable state.

The delusions as a rule haunt the patient day and night, and no arguments, however weighty or by whom stated, will make the least alteration in the firm morbid belief. In fact, the stronger the argument against the delusions, the more confirmed will they become.

In these cases the relatives, not recognising the real mental condition, will allow arguments to be brought forward by clergymen and others, in order to disperse the insane notions, but, alas! with no good resulting, but positive injury. For it is not simply a mistaken idea, but a morbid perception, resulting from a brain functionally or organically disordered, and the person so afflicted being an irresponsible agent, and thus incapacitated by disease from shaking off his mistaken belief.

All patients suffering from religious insanity must be regarded as suicidal; they generally either have a disgust for this life, and are consequently anxious to leave it, or are under a morbid conception of a text of Scripture, and will attempt self-mutilation.

Some patients will artfully seize an opportune moment to conceal a weapon to inflict self-injury. Others will openly and shamelessly avow their intention of destruction, and if left to their own inclinations will starve; frequently this pertinacity in refusing food becomes so excessive that mechanical means have to be used to feed them. The thoughts are generally directed towards the evils of a future existence, and this unseen state causes gloomy anticipations of melancholy and remorse, and they are taunted by self-inflicting imaginations.

Whilst in this state of perturbation and gloom, the very face

of nature appears to them obscured, and a veil to be hanging over sun, moon, and earth :

“ Melancholy spreads itself
 ’Twixt heaven and earth, like envy between man
 And man—and is an everlasting mist.”;

The immediate friends and relatives of a patient who has these premonitory symptoms frequently refuse to believe in the opinion as expressed by the physician as to the case being one of mental unsoundness, and at the same time will not even regard it as suicidal. Medical men, who have these cases brought under their immediate eye, frequently see frightful results in consequence of the relatives not following out their advice.

Were I disposed, I could narrate many cases which have come under my own observation of persons in the incubatory stage of religious insanity who committed suicide, in consequence of the obstinacy of the friends in refusing either to place the patient under supervision in an asylum, or allow a proper attendant to be placed with him until the dangerous symptoms had subsided.

As the disease advances the sadness and gloom become excessive; he rarely smiles or exhibits any symptom of gratification, seeking solitude and avoiding cheerful society, the mind burdened as if by some hidden sorrow. At times he is irritable, worried and disturbed by the slightest noise; the least thing contrary to his own individual wish annoys him; he fears danger from the smallest circumstance, and exaggerates the slightest difficulty into one of the greatest importance. Pain and remorse are caused by impressions which were formerly most agreeable to him. He is either in a state of perpetual discontentment, or, by shunning society and seeking solitude, he is able to brood uninterruptedly over his insane imagination—

“ I want to be alone, to find some shade,
 Some solitary gloom, there to shake off
 These tumultuous cares, that vex my life,
 This sick ambition on itself recoiling ;
 And there to listen to the gentle voice,
 The sigh of peace, something—I know not what—
 That whispers transport to my heart.”*

The feeling of hatred and indifference often shows itself in a morbid dislike to those by whom he is surrounded. This

incipient stage of melancholia is accurately depicted by Shakespeare :

“I have of late (but wherefore I know not) lost all my mirth, foregone all custom of exercises ; and, indeed, it goes so heavily with my disposition, that this goodly frame, the earth, seems to me a sterile promontory ; this most excellent canopy, the air—look you, this brave o’erhanging firmament, this majestical roof fretted with golden fire—why it appears no other thing to me than a foul and pestilent congregation of vapours.”

The melancholic patient, having been in a state of dread and apprehension for some time, gradually passes into a state of helpless despondency.

Religious insanity is usually of long continuance, and may terminate either in a restoration to a normal state of mind and body, or in incurable insanity and confirmed mania.

This latter is remarkable for its destructive propensities and depraved state of morality. The mode of its termination depends on the character and general disposition of the patient. Sometimes it terminates in profound insanity and hypocrisy, the most profound and obdurate condition of the mind there is, for the knave knowingly acts a part which he no longer believes to be true. Superstition and fanaticism are other modes of its termination, leading oftentimes to murder, the infliction of bodily cruelties, or revenge, the deadliest of the evil passions.

I propose to consider very briefly the intellectual, social, and moral causes of religious insanity. There is in the world a common propensity to create a religion of our own, founded simply upon the instincts of religion. It is in fact nothing more than yielding to the instinctive feeling of piety which pervades every breast. By mixing up our private feelings with those in common to the rest of the world, without definition or agreement, we confuse ourselves, become puzzled or disgusted, and end by setting forth our own individual feelings in the place of the public standard of rectitude. In so momentous a matter as that of death and futurity, which is, in short, the essence of Christianity, the probability is, that what is private is wrong, and that what is common is right ; for true religion is a revelation from external sources, whereas false religions are hallucinations from within. The external law of the Gospel is binding to mankind, but an internal ideality is not binding even to the idealist himself. It has been acutely said that man makes his God like himself, whereas Revelation proposes to make man no longer like himself, but like its own Great Author. In an intellectual sense, it is from mistaking a

particular idea for universal truth that religious madness springs. This fatal mistake may be the result of imperfect education, or of a particular education on a particular idea, or it may be the result of a mind invincibly defective, perverted or impaired by bodily disease. It is with the two last causes that we are chiefly concerned.

Knowing as we do the all-engrossing nature of religion, and the intensity of the emotion evoked by it in sensitive minds, we should be prepared to expect every form of mental aberration from a perversion of religious truth. Religious madness is usually attributed to religion itself. No such imputation can be lodged; it is more than probable that the strong religious sentiment and feeling guides a man rightly when he would otherwise have failed, and that it is actual brain disease which aggravates this sentiment, rather than that this sentiment produces the brain disease, and as a result its manifestation, religious insanity. But it must be admitted that in some cases religious excitement develops mental disorder.

Considering that sensitive minds are generally morbid, the result of organic changes going on in a body morbidly alive to every external stimulant, we shall perceive that religious madness is the complex result of partial knowledge, imperfect faith, excessive sensibility, and cerebral disease combined. Hence the inveteracy of its character and the difficulty that is experienced in treating it properly and successfully; for it is not a mere mental act, it is not a violent effort of volition, but, on the contrary, it is an excitement upon the abstract truths of religion, originating from or closely connected with actual organic changes of structure, so that it has often been affirmed that religious excitement will be found to resolve itself into animal excitement. Religious insanity must be considered as a disease of the brain, and not as a metaphysical alteration and abstraction of ideas. The victim of this form of mental disease is subject to well-marked delusions and hallucinations. These symptoms, especially the latter, indicate very seriously a disturbed circulation through the encephalon, or else actual disease of the brain itself. Hallucinations of the insane are not voluntary, and always co-exist with impaired intelligence, resulting from an impaired or disorganised brain. The consciousness is diseased; the lunatic is often convinced of the truth of the false delusions of which he is conscious.

The several moral intellectual powers and qualities that enter into and make up the mind and character of man are very irregularly distributed.

One is favoured with a large proportion of one faculty and a disproportionally small quantity of another, very little of a

third, and none at all of a fourth. From the lowest idiot, who cannot even control his muscular powers so much as to move his limbs rightly, or masticate his food, who neither is gifted with the senses of seeing, hearing, or feeling, up to men of the highest order of intelligence and intellect, are to be found all intermediate grades of intelligence, without an interval between them.

But paramount to this variety of intelligence is consciousness, that fundamental principle of the mind common alike to the understanding, the passions, and the intellect—that faculty which cannot be entirely lost except by the total destruction of the mind itself.

The most miserable idiot is gifted with consciousness, and many of the insane are perfectly conscious of the extravagancies they commit. Their motives may be irrational, but their act is a conscious one, be its consequences what they may. But, at the same time, no form of insanity ever exists without a perversion of the conscience, as well as an impairment of one or more of the mental faculties, inducing a loss in the power of comparison. Judgment—and as religious insanity is specifically a disease or error of judgment—it follows therefore that the person religiously insane is incapable of appreciating the value of the just evidences of truth. One of the moral causes of religious insanity is a diseased consciousness interfering with the clearness and independence of the judgment.

The fear of death may be mentioned as another of the moral causes. In many cases, when the conviction that death is imminent and irretrievable, the mind is so depressed that it never afterwards entirely recovers from the shock. Indeed, the mental faculties are so much impaired as to render the account and narrative of these persons often incorrect and exaggerated. They are hallucinated at the moment, deceived by their own sensations, which are perturbed and confused, and which lead them to deceive others without meaning to do so.

I will consider, in conclusion, a few of the special features met with in religious insanity. The zeal which accompanies this variety of insanity is as distinct from true religious conviction and practice as health is from the heat and flurry of stimulants, and the majority of religious madmen have not one correct idea of religion nor of a single article of faith. The mind, if turned especially to one subject, particularly if it be an abstruse one, cannot dwell on this one idea exclusively for any length of time without incurring a great risk of becoming disordered, and if it does not become visibly deranged, it will form a false perception and estimate of things, and will attach to trivial and unimportant matters a weight and importance they do not deserve.

The greater number of people are never taught anything accurately. They grow up by chance, they live and die by chance, and, when they die, they depart this life to go they know not where and to be they know not what. In all of them the religious instinct is innate. They feel they were not born for this short life alone. They are conscious that they were not meant to die like the beasts that perish. They look upwards to the heavens, and wonder who and what they are. The meanest intelligences among them feel as much as this; and how much more would they not feel and do, were they but properly instructed and trained, as moral agents and responsible beings, to play their parts in time, so as to be sure of winning their reward in eternity? The moralist, the philosopher, and the politician cannot contemplate such a critical disorder of society—shall we say of *civilized* society?—as this without dismay, nor ponder, on the future without anxiety and regret.

Religious insanity may be considered as the unavoidable consequence of religious ignorance. Those who have been carefully grounded in their faith can scarcely go mad upon it. It is the same in this respect as in most others—a little knowledge is a dangerous thing. No one can teach himself. At the best, he is only an amateur. Earnest indeed he may be, but if so, only so much the worse, for the more earnest, and if earnest then sincere, the more certain he is of falling into errors both in matter and form of the gravest description. To become a proficient, he must have a master, go to school, and learn his rudiments, beginning from the beginning, and working upwards to the top. Without this preliminary groundwork, every subsequent effort will be contemptible and worthless. Smattering is the bane of every art and science, and so it is of religion.

If it happens to be religion that the enquirer takes up late in life, the mind is exclusively directed to one dogma, doctrine, or point of discipline, to the total neglect of other doctrines or their partial obscuration; and this magnified doctrine or dogma generally one of secondary importance.

A mind untrained in religious discipline is prone to vagaries, and easily becomes deranged at the first peep into the stupendous truths of Revelation.

Religious sentiment or instinct enters so materially as well as intimately into every motive and every action, and tinges so deeply and indelibly every thought, implicit or express, that it may be said no event happens in the world which is not a scene in one of the acts of a vast religious drama. It is manifested in every deed both public and private, and is displayed with the greatest intensity by such as are highly nervous and susceptible. Even the infidel is an actor whose life is passed in

braving his own instincts, and the devotee, too, is another actor, whose days are passed in nursing and putting forth his instincts. Religious feelings, when intensely professed or denied, whether true or false, cannot fail to leave their traces upon the fine organism of the brain, and heresy and sometimes mania is the result. The heretic is often only a religious madman, while, on the other hand, the religious madman is sure to be a heretic, since his insane notions are partially distorted and irrelevant.

The most dangerous errors, both public and private, are the miserable consequences of degenerate piety and ignorant devotion. Wars and cruelties of all kinds have been perpetrated by all parties to root out a hostile creed; and were we to look only on the dark side of Christianity, we might be induced to despair of human happiness both here and hereafter. Fanaticism, folly, and knavery are traceable in every form of religion, and very distinctly can they be traced in the false superstition so prevalent in the age we live in. Under the cloak of religion, what enormities have not been perpetrated—what stupidities have not been enacted—what misery not inflicted—what confusion not created! Were we permitted to do so, we would drop the curtain over the lurid scene, and shut it out from every eye. But this may not be. Its extravagancies are the test of its reality, and its abuse the proof of its utility.

ART. VI.—MIND.

MIND is an element or entity, which, like a first principle or fact, is incapable of demonstration or proof. It *exists*—identical and unique. It admits of neither more nor less. It is absolute and entire, indivisible and indiscerptible. It is in its own nature *one*—*ὅν*, ens, sum, being, essence. It energises through the ponderable organ the *brain*, and the material organ subserves the immaterial essence, or *vis vitæ*. The abrupt space that intervenes between the last portion of matter and the earliest dawn of intelligence is an unfathomable gulf, tantamount to infinitude—for infinite it must be, since nothing can fill it up. No correct reasoning can conduct us farther than this.

In the monogamic molluscæ, which propagate by spontaneous offsets or shoots, and not by reciprocal generation, the new creature is not the product of two, but the self-division of one ; and yet in these animals or animalculæ, the life thus apparently multiplied in each is nevertheless but one and the same life in principle as that from which it sprang. Its being is one, while its mechanism is alone multiplied. Its immaterial being is not manifold, although enunciated by a material organism, which is manifold.

In the same sense, the mind may pass from an active to a latent state, and from a latent to an active—as in sleep, coma, suspended animation, and ovarious germination, in each of which instances the mind is as positively latent as the electricity in the thundercloud before it is bolted forth by fulmination, or the fire in flint before it is struck out into sparks by collision with steel. Now none of these things can be predicated of the material organ of mind—the brain, which obviously rests upon grounds of enquiry altogether different from the element of which it is only the instrument, so that the mind may be either active or latent ; but not so the brain. The mind cannot be duplicated or divided into parts, although the brain may be, and in fact is, both duplicated and subdivided. The mind is not the medium of thought, although the matter of the brain is. The mind is the generative principle, indigent of nothing—the brain is the subserving instrument, indigent of everything. The particles of the brain, like those of the body generally, are heterogeneous, dividual, personal, and transitive—the mind, on the contrary, is itself a monad, homogeneous, individual, identical, and perpetual.

The existence of animals the lowest in the scale of animated

nature seems to be for no other purpose than that of mere sustenance and multiplication by offsets or germs. In them there appears, as in the *hydra viridis*, no trace of a nervous system, at least none that in the present state of our knowledge we can properly define as such, unless the fine cord round the mouth be a nervous filament; nor can we ascertain anything like intelligence. They are scarcely raised above vegetables. The *ascaris*, whose life is as limited as any living creature's can well be imagined, presents two white cords. The *asterias*, or star-fish, has a circle of ganglia or brains, from which radiate distinct nerves; this may be only the sympathetic, whose existence may be independent of a brain. Many of the molluscous creatures, as the *tunicata*, but little raised above the sponges, and fixed to a rock all their lives long, have nothing like a brain, particularly not a double one. The oyster is the first to exhibit the brain doubled, only the two brains are separate, without a commissural connection, unless the œsophageal arch can be regarded as such. It is singular that with this approximation to a twofold brain, Garner should have pretended to show distinct organs of vision on its mantilla or beard. But no sooner are feet produced than an additional portion of brain is bestowed, in correspondence with these members, the *pedal ganglion*, which marks a kind of epoch in the history of the nerves; for where there are feet there is also progression, and the act of progression implies an object of desire to be sought for and obtained by judgment, comparison, and volition. A more highly organised brain is therefore requisite. Thus the common slug has two cephalic ganglia, evidently united by a small, but distinct, commissure. The brain becomes a double organ. Some exceptions may be made to this order as an established law; for the *myriapoda*, or centipedes, which are higher than the slug, have several brains—one to each leg; while the crab, still higher than these, has only a single brain, but then its large pedal ganglion is almost a second brain. The supra-œsophageal brain of the *pearly nautilus* is duplicated, and in the cuttle-fish this duality is still more distinct. As soon, however, as the sensorium becomes a more valuable organ, we arrive at those creatures which enjoy a brain in a brain-case (*myelencephala*). These animals cannot live without a skull-box, or casket, on purpose for holding their seat of intelligence. They no longer subsist like mere vegetation, but exist by intellectual pursuits, as in fishes, reptiles, birds, &c. The brain is now invariably a double organ, more or less perfect, and generally united by commissural bands—whiting, cod, eel, skate, &c. In the frog this is very evident. But, nevertheless, the commissures are

as yet lost or confounded in the close proximity of the hemispheres. In birds, though the two hemispheres are more manifest, yet the *corpus callosum* is wanting, as it is also in marsupials. The organ of comparison is defective, and the judgment low. In the beaver, however, with its constructive propensities, intelligent conduct, and provident habits, not only is the brain decidedly double, but the *corpus callosum*, or organ of comparison, is proportionally large. Convolutions are likewise visible. As we go on ascending in the scale of organic intelligence, the hemispheres become more distinctly double, the commissures larger, and the furrows deeper. In the elephant, so renowned of old for its understanding, and in the porpoise, so remarkable for its sagacious tenderness in nursing its young, all these characteristics are particularly visible. The brain of the chimpanzee differs from the brain of man only in size and weight; therefore, in the smaller size and extent of the convolutions, the same parts without exception exist in both. Whether the cerebral matter of the ape differs from that of man in microscopic characters, or how otherwise it may differ, are problems that have not hitherto been worked out nor explained.

There is enough in all this to show that comparative anatomy attests a truth which we were first led to assent to on the slender ground of induction and analogy. In man, with his large brain and exalted intellect, the furrows are decided, the commissures bold and strong, and the brain a double organ, and all its intricate foldings are, as a sculptor would say, deeply chiselled and finely finished off. It is further to be noticed, as an anatomical fact, says Meckel, in a note quoted by the late Sir Henry Holland, in his "Notes and Reflections," that in the brain and spinal marrow the external parts of the two sides are less exactly symmetrical than those within; the surface of the brain showing this, perhaps, more distinctly than any other part. Every one may find an opportunity of observing a difference in the relative size of the two sides of the head of some of his acquaintances; nor does this disparity or inequality seem to be detrimental to the intellectual development, but, on the contrary, rather favourable to it; for persons of distinguished talents have had their heads larger on one side than on the other, as Cicero and Bichat, for instance. Indeed, some go so far as to fancy that whenever this inequality exists the understanding is much better than in those whose heads are more exactly symmetrical. So, also, the convolutions of the brain are a manifestation of mind. When the foldings and furrows are deep, it renders the head long, and the phrase of "a long-headed fellow" means a clever man. Plutarch says that

Pericles had so long a head that he was ashamed of it, and in his statues was always represented with a helmet, on purpose to hide this supposed deformity. Had he enjoyed the advantage of living in the present day, the intellectual vanity of the great Athenian might have been induced to hail it as a distinguished beauty.

Again, as to *Mind*, whether of man or brute, it may be predicated that it is uniform, one and the same in both; and that *Understanding* is possessed by all animated beings in various proportions and degrees; as the sagacity of the dog, the sharpness of the ape, and the intelligence of the elephant, which are proverbial. Even *Moral Affections* are enjoyed by animals and insects. The horse is docile, the lion courageous, the spider deceitful. All these qualities are fragmental portions of the understanding, distributed severally throughout creation, for the particular use and purpose of each being; and are, when taken together and summed up into one, the human understanding complete, and, were not the various qualities of the understanding manifested by animals identical with that possessed by man, there could be no intercommunion between man and animals, for without this mutual intelligence the rider could not manage his horse, nor the sportsman direct his spaniel, nor the pig-boy drive his pigs, nor the blind man be led and guided by his dog. Animals and man must understand each other, otherwise animated nature would be a confusion. Even sounds of the voice and the meaning of words are frequently understood by animals as distinctly and fully as they are by ourselves; and the intent and object of our actions are perceived by them in the same sense as we intend them to be perceived. Thus the horse knows the sound of the trumpet, the smack of the whip, and the driver's bidding; the hound responds to the huntsman's horn, the cat minds the maid-servant's call, and the cow obeys the cry that hails her home to be milked. Stories are told of serpents that have become familiar with man, of insects that have mated with the prisoner in his cell, and of hares that have sat like cats before the fire. The mechanism of the beaver is like our own, because ours is the same as his; and the fox pilfers our poultry yards with the same adroitness as the thief pilfers our coffers. Thus the intelligence of animals is the comparative anatomy of the understanding of man; what is one in us is several in them. They are the analysis of the mind, of which we are the standard and type. By pursuing this train of reasoning, we might show that the less perfect understandings in man approximate to the lower understandings of animals. Thus we say, as stupid as an ass, as filthy as a swine, as timid as a lamb, as cruel as a tiger. The higher human

understandings admit of no such debasing comparison, since they cannot be likened to anything less than themselves. Great minds are not brutal, but, on the contrary, so elevated that they cannot be lowered by any comparison. They comprehend within themselves all the mental qualities of every animated being below them. It is this excellence that can never be predicated of any of the inferior animals, and entirely excludes them from the idea of possessing either an understanding or a soul, in the ordinary or philosophic meaning of the term.

But, as we have already shown, the mind in its fullest and soundest development is, so to speak, at the mercy of the healthy or diseased condition of the body. A slight ailment quickly overthrows it, or tarnishes its vivacity and brilliance. Genius is often cut short by it. Rossini lost the faculty of musical composition somewhere about the middle period of his life. He lived to be old, and died at seventy-six years of age; but he never recovered his original talent. Some change must have swept over the fibres of the brain, and damaged their congenital tenacity and fineness, to account for so irreparable a bereavement.

So delicate is the tracery of the nervous structure that the damage of a single fibre or set of fibres destroys the unity of the whole. It is like a grand orchestra, in which one instrument alone out of time or tune disturbs the harmony of the rest, and the finest musical composition in the world is entirely spoilt by the discord.

The preservation of the intellect to the latest period of age depends upon circumstances, over many of which we have no control. The nerves may be weak by nature, or there may be a scrofulous or gouty taint, the heirloom of the family, or a failure in the functions of the heart or stomach, natural or acquired. The early part of life may have been corroded by anxiety, weakened by privation, or overstrained by toil, which neither we nor our progenitors could either foresee or prevent. Wine or ardent spirits may have been too freely indulged in, and their use apologised for upon the plea of social engagements or a feeble constitution; while the more sensual passions may not have been held in with the curb of a tightened rein. Fortune may have arrived when she has ceased to be sought for, and reputation or celebrity bestowed or achieved when it is too late to facilitate the happiness of ourselves and those about us. In each of these instances the mind decays early, and the earlier the sooner the stimulus of necessity is withdrawn or suppressed. Besides all this, there is a climacteric period in man, as well as in woman. In woman it occurs soon after forty, or at the latest at fifty; but in man

it varies between his thirty-fifth and sixty-fifth years. But, whether sooner or later, it takes place in man, his character and figure both undergo a change, sometimes for the better, but more frequently for the worse. He becomes fat or thin, attenuated or obese. Old age sets in apace. The hair turns grey or white, the affections congeal, virility ceases; or, on the other hand, the figure remains lean and lank, the features are shrivelled, the hair falls off, and the complexion tans, while the mind improves, the wit sparkles, the understanding solidifies, and the flash of genius burns brighter than ever. The experience of a whole life comes into play, and the tardy seedlings of the spring embrown the autumn of our days with fruit. In these cases, the organic life suffers at the cost of the cerebro-spinal system. But, on the contrary, we see the mind degenerate without our being able to account for it. Follies of the most deplorable kind are committed in the most pitiable manner. The old man marries a young girl, and after having been respected for his frugality and prudence, suddenly breaks out and affects to play the boy, the gallant, and the fop. Sometimes something worse than folly ensues. The religious man turns a worldling, the upright a spendthrift, and the trustworthy a swindler; or he falls a dupe to religious enthusiasts and knaves, mistakes idealities for faith, fasts, prays, preaches, and insults the world.

No doubt alteration of the brain is taking place *pari passu* with these alterations of character. It may be atrophy, indicated by loss of memory, slowness of speech and manner, and debility of gait and action. Or the circulation through the encephalon may be checked or impeded by ossification or softening of the cerebral arteries, or by some distinct disease about the heart and large vessels; or the neurine may be undergoing a change, particularly on its peripheral surface, as well as on the surfaces of its several ventricles or cavities. The convolutions become paler, and the furrows shallower. The weight of the whole cerebrum and cerebellum is lighter, less complex, and seems to be reduced to the condition of the brain in early life. Softening of the surface of that delicate character which is detected only by letting a slender stream of water flow gently over it, is sometimes the only discoverable alteration. But what is a very usual occurrence, and yet one that is often passed by unnoticed, because it is discernible only to a well-practised eye, which may not be present at the right moment for observing its attack, is a very slight fit of apoplexy and paralysis—so slight, indeed, that it occurs and passes away unperceived, and is recognised only in its after consequences and permanent effects. This appears to have been the case in Moore and Rogers, the poets.

We have witnessed the same in private practice, and have observed that, though loss of life does not ensue from it immediately, yet in its ultimate effects it is sooner or later fatal, and from the date of its infliction the patient is an altered being—he never recovers himself, but continues to exist, like a venerable ruin, with the marks of decay indelibly imprinted on his front.

To the old themselves the imbecility of age is not so painful as it is to those who wait upon them. With the return of our second childhood we lose the consciousness of our prime. The loss of any of the senses is accompanied with the oblivion of its enjoyment. The blind are cheerful, the deaf happy, and the aged content. So that we are tempted to conclude that those exquisite lines of Goethe, so ably rendered into English by their noble translator, express a poetic fiction rather than a medical reality:—

“ Give me the active spring of gladness,
Of pleasure stretched almost to pain !
My hate, my love, in all their madness—
Give me my youth again !”

Although the sight of the angelic Margaret, as

“ She sat by the casement’s chequered glass,
The clouds fly by, and she watches them pass
Over the city wall——”

meditating on her love were sufficient to enkindle a spark of passion in the icy veins of an old dotard. But no; in the really old, whether early or late in life, from disease or excess, the flame is extinct, the ashes have been burnt out, and no spark can ever fire them again.

We knew an aged gentleman who, during the stunning effects of an apoplectic seizure, lost all his money by the failure of a bank. On recovering his senses, he could never be awakened to the feeling of poverty, nor the embarrassing conviction of being a poor dependant on the bounty of his friends. Another, during a fit of apoplexy and its tedious consequences, lost two of his dearest relatives by death, and came into possession of some considerable property. On his recovery he neither regretted their deaths nor rejoiced at his own good fortune. A third, who had always been an anxious and thrifty man of business, declared he had at length reached the goal of contentment, and that neither loss nor gain any longer affected him. A few months later, he died suddenly.

These cases might be explained in the dead house. But morbid

anatomy is not medicine, in the same sense as medicine is not a demonstrative science. Disease is a living phenomenon only to be correctly recognised and properly treated during life. After death, it passes into another domain, which is that of the anatomical demonstrator.

Humboldt is an instance of intellect undecayed by age. He died at ninety-one, and his mind was vigorous to the last. Strabo wrote his geography, it is said, at eighty-two; and Michael Angelo, who died at eighty-eight, preserved his mind and genius to the end of his days. His last will and testament was as grand as it was laconic, while critics are disposed to consider his last productions better than his first. On the other hand, the brightest efforts of genius have been conceived and executed before the meridian of life; of which Byron, Scott, Pope, Mozart, Weber, Tasso, Shakspeare, Sir Isaac Newton, and many others, are illustrious examples. It is popularly supposed that Homer composed his immortal epic in advanced life, and in painting and statuary he is usually represented as the blind old bard. Yet this was not the case. Perhaps the mistake arose from the Homer who recited those wonderful verses to his admiring audience not being *the* Homer who had composed them. It is the opinion of Longinus that the Iliad was the production of the mind in a vigour of manhood, and the Odyssey the poetic recreation or repetition of the evening of life. We agree with the great critic. For there are, as he says, some puerilities in the Odyssey, while there are none in the Iliad; the order of events forbids the conjecture that the latter was composed after the former; and, it must be owned that with all its quiet beauties, the Odyssey wants the pathos, the depth of colouring, the majestic ease and force of the Iliad.

The flame of genius burns alone, the envy or admiration of others, if not an exhausting and fatal ecstasy to its hapless possessor. A Raffaello or a Carlo Maratti paint in an atmosphere where meaner talents can scarcely draw their breath or handle their brush with freedom and effect. Meteoric in its essence, it shines by fits and starts, blazes for a while, and then goes out.

ART. VII.—THE DELUSIONS OF THE INSANE: THEIR REAL NATURE AS A MEANS OF DIAGNOSIS.

BY JAMES GEORGE DAVEY, M.D., BRISTOL.

THE object of the following remarks is to call attention to a circumstance of not infrequent occurrence, and of a nature calculated to interfere with that harmony of feeling and reciprocity of action so desirable as between the asylum proprietor or superintendent and the official inspectors, the visiting magistrates more especially.

My experience as a proprietor of a private asylum has extended over a period of twenty-three years about, and from time to time a question has been raised as to the insanity of a patient under my care. This question I have ever found has been hedged around with certain views so purely artificial, and so far away from the laws of mental science, that it has been quite impossible for me to accept the conclusions arrived at by the visitors; or, in other words, to agree with the advice given—involving, it may be, the removal or discharge of the patient. Such cases are more than likely to occur where the visiting justices include a gentleman who has been, or is, of the legal profession. The visiting magistrates with whom I have been officially concerned did through long years include a retired barrister; one who dearly loved his old calling, and looked to the law of lunacy, as reflected in the too famous Questions and Answers of the Peers and Judges, bearing date 1842, as all-important and truthful. Now the gentleman referred to did some good service in his time, and promoted by his zeal and praiseworthy efforts—made some twenty odd years since—the good cause of the insane in many particulars; therefore I can desire only to speak of him with due respect. In these remarks it will be seen that no allusion is made to the Commissioners in Lunacy, nor to the many among the visiting magistrates, from whom I have to acknowledge the reception of much courtesy and consideration; but to one only of the latter, whose duty it is to inspect asylums beyond the more immediate jurisdiction of the first-named.

As I have said, a question has been raised, from time to time, covering my residence at Northwoods, as to the insanity of a patient under my care; and in each instance of the kind some unpleasantness has arisen. If, as is too likely to happen, a difference of opinion has begotten discourteous, if not angry words—if each visit made or examination gone into

has provoked feelings the reverse of friendly—if whatever confidence on either side towards the other existed has diminished, even in a small degree—it is, of course, most desirable to recognise, with no loss of time, the cause or starting-point of such “difference of opinion,” with the view to its removal.

The annexed case of A. B. (so to designate it) is a good example of the “question” referred to, because it takes in, on the one side, the legal fiction comprised in this same “Law of Lunacy,” whilst, on the other, it ignores those teachings of medical science with which psychologists are familiar.

I may premise—the question of the insanity of A. B. was decided in the negative, because only she manifested no positive or satisfactory sign of “delusions.”

A. B. was admitted at Northwoods in the usual formal manner—that is to say, the “order” and “statement,” as well as the “medical certificates,” were all as the law requires. The facts of the case were duly set forth in the proper place; the indications of impaired mind were registered, i.e. the several signs of insanity, as they were revealed to me, were recorded after the most approved manner. In my report of A. B. on her admission are seen these words: “She appears on first looking at her to be free from mental disorder; but there are various small yet conclusive ways in which she reveals the presence of much cerebral mischief.” It is added, in due course, “She refuses her food, and much difficulty is experienced in feeding her. There is great emaciation. Through the night A. B. is restless and sleepless. She will persist in retaining her urine so long and so persistently that the catheter is of necessity brought into request. Her state is one of childishness; she requires much looking after, and urging to the simplest acts of attention to her own immediate wants. Without the slightest force of character, with an apathy which nothing can overcome, and which infuses itself into each act of her existence, she will, as the general rule, neither eat nor drink, neither get up nor go to bed, neither go out nor return when out, neither dress nor undress, and so on in everything. Her capricious wants and morbid fancies so press on her and influence her for evil that much and constant care and management are required.”

Such a form of words was held to be unsatisfactory and inconclusive. The visitors, urged thereto by the retired lawyer before referred to, would regard A. B. as one sane and fit to be discharged. After several long and tedious visits, and after much not very agreeable correspondence, the visitors incurred the responsibility of discharging my patient; and so it turned out that a much afflicted lunatic was removed from the necessary

care and control to the family circle, wherein those nearest and dearest to each other—including the patient—were rendered, for a time, really miserable. A. B., said the visitors, is nowhere stated to have had delusions; such are not proved to have been present during her stay at Northwoods, or not until a certain time subsequent to the commencement of our especial enquiries into the state of mind of A. B. We therefore take leave to doubt their presence altogether.

This statement was not, indeed, what may have been looked for; but with matters of a personal character this paper has nothing to do.

My case book records this fact, viz. A. B. is discharged by order of the visitors, it being their opinion that she was and is not of unsound mind, but simply nervous; but very opposite are the expressed opinions of the family medical attendant, the mother, and of myself.

The present is an opportunity too good to be lost, inasmuch as it illustrates very clearly the antagonism of law and medicine—of lawyers and doctors. The whole case may be used, and rightly used, as a sign or index of the present bad times, and as evidence in favour of other and more truthful views in regard to asylums and the insane.

The retired lawyer had, doubtless, his excuses; he was trained in the law's defects and very shortcomings, and what could have been expected of him else than that we have seen. He confined his attention to the state of the "consciousness" of A. B. He looked no further or deeper down than the state of the knowing faculties. He asked himself thus: Is the lady before me "able to distinguish right from wrong"? and so on. Convinced of the soundness of Leonard Shelford's teachings "Concerning Lunatics," Mr. ——— declared that a "sound mind is one wholly free from delusion; an unsound mind, on the contrary, is marked by delusion." In other words, "the true criterion, the true test, of the absence or presence of insanity" . . . "may be comprised in a single term, namely, delusion."

In ignorance of the mind in a state of health, he was unable to appreciate the many and diverse springs of human thought and action. The strong affections of our being, their force in moulding the character, their ever-widening influence over the speech and actions of man, now moving him to virtue and now to vice, and putting him, ever and anon, away from or outside the fair promptings of his mere knowledge of things, these were as nothing in this lawyer's comprehension. It could not take in the first cause of that *master passion* concerning which Pope sang so charmingly and so well; and whereby one man is seen to realise the merits of an Oberlin, a Melancthon, a Basil

Montague, or a Howard, and another the demerits of a Pope Alexander, a Palmer, the Eighth Henry of England, or a Rajah of Bitpoor.

Furthermore, it did not, as the result in good part of a defective training, take in the prime fact, to be proven each succeeding hour by a really thoughtful man, that the ever-active sympathies or emotions of our being, rather than the crude measure of our intellects, it is which go to form our likes and dislikes, our preferences for this or that. Doubtless the like or the wish is ever the father to the thought. The vain wish—the vanity—which is said to have prompted the Prince Henry to “hunger” for his father’s “empty chair” ere even his “hour was ripe,” and in spite of the knowledge of those kingly cares of “Henry IV.,” which “had fed upon his body” and “eat the bearer up,” affords a strong example of the fact. An equally apt illustration of the workings of the emotional mind is seen portrayed in the lad Walter, “Uncle Sol’s kind friend,” the “master passion,” i.e. the affections, in whom are thus eloquently referred to :

“As Walter sped along, intent only on the distress and anxiety of his kind relative, everything seemed altered. There were the usual entanglement and noise of carts, drays, omnibuses, wagons, and foot passengers; but the misfortune that had fallen on the wooden midshipman made all things strange and new. Houses and shops were different from what they used to be, and bore Mr. Brogley’s warrant on their fronts in large characters. The broker seemed to have got hold of the very churches, for their spires soared into the sky with an unwonted air. Even the sky itself was changed, and had an execution in it plainly.”

It is evident that Shakspeare and Dickens read the human mind aright; with such a knowledge of its healthy characteristics as these great men have displayed, it is very unlikely they would have fallen into the error in regard to the existence or not of delusions among the insane now complained of. If it is important in every case of doubtful insanity to accept as the groundwork of our enquiry the knowledge thus indicated, in regard to the mental operations, as they occur to the sane, then indeed may lawyers extend their studies to the poets and novelists—accepting, as we may, the two here named as the highest type of their respective excellences.

Having regard to the facts of the case here considered, what hope remained that the retired barrister would do else than repudiate the “emotional theory of insanity”? That we accept it as the basis of our reasonings, and as the starting-point of our many means of control of our patients, is not infrequently

urged as a proof of its importance. Vain indeed are our endeavours to persuade some that neither "consciousness" nor the ability to distinguish right from wrong constitutes anything like a reliable test of either the sanity or the responsibility of an individual; in other words, that the state of the knowing and reflective faculties is an indifferent criterion of a sound mind and of man's power to duly control himself. It is to be feared that that time is yet looming in the distant future when the many outside our speciality, yet near to and touching us in virtue of their office-bearing, will see that the great majority of those really insane are so because only their moral natures, i.e. their affections, have taken on either an exalted or abnormal action; and that this state of things it is which, as the rule, constitutes the very pith and substance of mental disorder in each one of its many varieties.

However it well becomes us to hasten, as best we can, the advent of truth; and to demonstrate the grounds on which psychologists affirm—

1st. That the history of mental disease is the history, for the most part, of a perverted moral sense, the cause of which is to be found in either grief, disappointment, fright, losses in business, domestic trouble, anxiety, and so on.

2nd. That insanity has first manifested itself in the patient by some unusual or capricious state of the feelings or emotions, some excessive indulgence of the passions or propensities, constituting rather an exaggeration than an alteration of the natural character, the knowing faculties remaining unaffected.

3rd. That the first person who becomes aware or conscious of the impending affliction is the sufferer himself; and that, knowing it, he strove, but in vain, to hold on to his self-control, so fast receding from his grasp.

4th. That if delusions, so called, make their appearance in the course of the malady (a matter by no means certain) these are found harmonising with some dominant and deranged feeling or emotion or propensity, constituting the mere effect of a pre-existing cause.

5th. That if in the absence of the necessary care and control, any criminal act is attempted, the same ought to be looked upon as an indication, not of an impaired understanding, not of an inability to distinguish right from wrong, but of a temporary and abnormal excess of emotion or passion, whereby all controlling power is lost, and the patient is reduced to a mere automatic or machine-like existence.

6th. That if recovery succeeds to all this, then will it be observed that its approach is marked through the feelings or affections; that their *unusual or capricious state* becomes

“small by degrees and beautifully less,” until the natural character is yet again reached.

There can be no kind of difficulty in coming to these several conclusions, if it be borne in mind that the many primitive faculties of the mind having their seat or location in just as many portions of the grey matter of the convolutions, it must follow that each one of such primitive or indecomposable faculties—whether or not they relate to the emotional or intellectual man—must depend for its healthy manifestation, or otherwise, on the especial tone or quality of a distinct portion of brain matter; and, in this case, it follows that the individuality or peculiar nature of any given case of cerebral disorder will be dependent on what distinct portions of the brain or on what “organs” are attacked, their number and size. For example, those parts or portions of grey convoluted matter underlying the several primitive faculties, known as *self-esteem*, or pride, *veneration*, and *destructiveness*, may each of them take on an exalted or depraved action, may become diseased, and ultimately reach so great and painful an intensity that the speech and actions of the patient may overcome all bounds, and realise the common features of acute mania. Now the first sign or symptom of disease so located is expressed by an unusual and extraordinary display of either pride, religious enthusiasm, or anger. If the abnormal action continue unabated, it may or may not happen that a delusion will become superadded to the first indications of mental derangement, constituting, as it were, an apology for the ostentatious deportment, or fanaticism, or extreme anger, or cruelty of disposition. In each of the instances imagined the delusion is seen to be in harmony with the preceding and morbid affection of a part or “organ” of the brain, and not only so, but to express the especial purpose or function of such “organ.” It is on these grounds we come to appreciate, as we should, the thousand and one delusions of madmen, their vain imaginings and assumed personifications, and to regard them as so much morbid colouring, devised or accepted voluntarily, for the most part, for or on behalf of their deranged moral feelings, or—which is much the same thing—as a real and tangible ideal of their several innate, involuntary, and morbid impressions. If, as has been shown, the sane man—him in the exercise of the *mens sana in corpore sano*—is not proof against the strong influence of his emotions over the intellectual powers, it must not be expected that the insane man—him with the unsound mind—is proof against the same emotions, or has not his intellect more and more deeply tinged by his passing loves and joys, his surging hopes and wild ambitions.

However, both theory and practice go to show that a "delusion" regarded as a symptom or indication of insanity is most uncertain; that when found to exist, it is, not infrequently, temporary only; and that whilst it may complicate an early and mild cerebral affection, it may not be present in brain disease of long standing and of much severity.

It is now thirty years since I penned these words, viz.: "A delusion, so called, holds much the same relation to the insane mind as a simple prejudice does to the mind of him said to be in the enjoyment of one sane and healthy. The delusion, like the prejudice, does not, or need not, imply a *bonâ fide* belief; they are alike thus far, they indicate the presence of some innate and dominant affection or passion wherewith the psychological nature of both, the sane and insane, is imbued." "In fact, this delusion test is altogether a fallacy; a large number of insane persons are without delusion of any kind, have been insane five, ten, or fifteen years, but during the whole period of their disorder have not manifested anything like a delusion. This mere symptom of cerebro-mental disease is not always present, and when it does show itself, it very much more commonly than otherwise expresses only the nature of the predominant feelings in the patient; and with these it is always in harmony, as cause and effect are ever seen to be." . . . "An insane female, once under my care, was remarkable for the very high opinion she had of herself; her *self-esteem* it was which gave the character to her deep and long-standing affliction. This patient called herself a Queen; she would not infrequently occupy herself in marking her apparel 'V. R. Buckingham Palace.' After devoting much care to this self-imposed task, she would be very angry, and express considerable annoyance at what she called her *stupidity*. This old lady seemed so to indulge her delusion as to exhaust it. With her pride was a prejudice, and thus she deluded herself. That she ever believed herself a queen I never could persuade myself. In fact, I have taken, at various times of my life, considerable pains to get at the real state of the minds of patients said to have delusions of different kinds, and I am induced to conclude that, in by far the majority of cases, they do not themselves believe in the delusions attributed to them."

It would be more than ungracious were I to omit the fact that reformers—aye, and good ones—are to be found in the ranks of the lawyers. The minds of a few such are of a widely different calibre to that of the retired barrister so often referred to.

A reference to the famous trial of McNaughten, for the murder of Mr. Drummond, shows that the present Lord Chief Justice Cockburn, who in 1843 conducted the defence of

McNaughten, acting under the authority and guidance of our profession—of, for instance, the late Dr. F. Winslow, Spurzheim, Combe, and Ray—dissented entirely from the views made public by the peers and judges, in the several Questions and Answers already alluded to, and echoed to even this present time.

In the defence of the prisoner, these words occur: "It is now, I believe, a matter placed beyond doubt that madness is a disease of the body, proceeding from the cerebral organisation; and that the knowledge of the disease can only be precisely and accurately ascertained by those who have made the study of this disease, and of its pathology, the object of long reflection, of diligent investigation, and of attention and experience." "How can we," it is asked, "who are brought into contact only with the sane—how can we be competent to judge of the nice and shadowy distinctions which mark the boundary line between mental soundness and mental disease?" "Thank God," continued the Lord Chief Justice, "science and humanity have reached the dreary abodes of those miserable beings—the insane; and whilst the one has poured the balm of consolation into the bitter cup, the other has held the light of science over our hitherto imperfect knowledge, has ascertained the true existence of the disease, and has marked its boundary in order to the restoration of the sufferer." "Propositions and maxims arose during the times of ignorance—and thus alone can I explain the crude maxims, inapplicable to all the forms of the disease, which are everywhere laid down." He added: "The insane, though phrenzied at the time on one point, may show the highest degree of subtlety on that point, and be in the full possession of the ratiocinative powers upon every other point. The madman may, in carrying out his fell purpose, not only show himself perfectly aware of the nature of right and wrong, and in every way competent to manage his own affairs, and discharge all the relations of life, but will in so doing exhibit all the skill, forethought, subtlety, and cunning of an individual in the possession of his ordinary faculties."

The entire aim of this successful defence of McNaughten was to prove that, the human mind being compounded of many primitive faculties or powers, any one of them is liable to derangement—the remainder preserving more or less their normal state of being; and if so, it must happen to us to witness examples of, say, a becoming self-respect degenerate into a deplorable and absorbing egotism and pride; the mild and fascinating demeanour of the sincere Christian exchanged for the rancour and intolerance of fanaticism; a necessary caution or prudence pass into a painful and uncontrollable timidity and suspicion; and so on to the end.

The late Lord Erskine has given to the world very similar testimony against the theories embraced by the Law, and in favour of Nature as we have come to read it. When discussing the legal aspect of insanity, so to speak, we find these words, viz.: "If a total deprivation of memory is intended to be taken in a literal sense of the word—if it is meant that to protect a man from punishment he must be in such a state of prostrated intellect as not to know his name, nor his condition, nor his relation towards others—that, if a husband, he should not know he was married, or, if a father, could not remember that he had children, nor know the road to his house, nor his property in it—then no such madness ever existed in the world." "It is idiocy alone which places a man in this helpless condition, where, from an original mal-organisation, there is the human frame alone, without the human capacity." "Among the insane there are those who have not only had the most perfect knowledge and recollection of all the relations they stood in towards others, and of the acts and circumstances of their lives, but have been, in general, remarkable for their general intelligence, their subtlety, and acuteness." "Reason is not driven from her seat, but distraction sits down upon it along with her, and holds her trembling upon it, and frightens her from her propriety."

How certainly do the words of the great lawyer named remind us of the piteous exclamation of Coleridge, "There is no hope for me; my case is a species of madness, only that it is a derangement and utter impotence of the volition, and not of the intellectual faculties!"

Moore and George Eliot have, it would seem, realised the same too painful position of Coleridge in the persons of Zuleika and Hetty Sorel. In the poet's charming description of his much-loved heroine we find these few yet eloquent words, viz.:

"The mind was still all there, but turned astray :
A wand'ring bark, upon whose pathway shone
All stars of heaven save the guiding one."

Those acquainted with George Eliot's "Adam Bede" will, without doubt, recognise in the highly wrought confession made to Dinah, and put by the author, or rather authoress, into the mouth of the unfortunate Hetty, a kindred "mind turned all astray," and "wandering with no guiding star" towards its inevitable and sad doom.

One word more—if the preceding remarks will help the removal of *one* source of misapprehension on the part of those to whom we, or many of us, owe an allegiance; if what has

been said will promote the acceptance of a more correct estimate of the nature of the "delusions" of the insane under our immediate care, and render more easy and clearer the diagnosis of madness—then surely may we anticipate a more desirable and pleasant relationship, and a better understanding, as between the "Visitors" and ourselves. Moreover, when this much has been attained, it will follow that the removal or discharge of patients from our care will find a better excuse and a fairer explanation than is now occasionally found in the mere absence of "delusions," so called, in him or her insane.

ART. VIII.—ON THE ARTIFICIAL FEEDING OF THE INSANE.

BY HENRY SUTHERLAND, M.D. M.A. OXON., M.R.C.P. LOND.

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THE subject of the artificial feeding of the insane is one that has been already so fully discussed that it is felt necessary to offer some explanation of the writer's object in drawing attention to a topic which, at first sight, appears to have been already exhausted.

The intention of the compiler of this paper is to endeavour to bring forward a *résumé* of all that has been lately written on forcible alimentation; and to give, as briefly as is compatible with clearness, a few practical directions for performing the different methods of artificial feeding.

As some division of the subject is necessary, it will be considered under the following heads:—

- I. Causes of refusal of food, as far as they relate to treatment.
- II. Accessories to artificial feeding.
- III. Moral treatment of the refusal of food.
- IV. Rules for feeding by the mouth or nose.
- V. The position of the patient.
- VI. Methods of opening the mouth, and of keeping it open.
- VII. Methods of feeding, and apparatus.
- VIII. Formulæ for diets.
- IX. Indications for the different operations of feeding, and directions for performing them.
- X. Feeding by the rectum and by other means.

I. CAUSES OF REFUSAL OF FOOD.

The etiology of refusal of food can only be briefly glanced at, as the more immediate object in view is the treatment of symptoms dependent upon causation.

The causes may be roughly divided into moral and physical.

Moral causes would include all emotional influences connected with a dislike to food, such as real grief, which the insane are sometimes quite capable of feeling when first separated from their friends; suicidal intention; and also delusions. Delusions may refer either directly to the patient's self, as

when he imagines that his bowels are stopped up, or indirectly to himself, as when he believes that his food is poisoned. Religious delusions are occasionally very troublesome to combat, as they may be sometimes founded upon some particular tenet which the patient is really bound to observe, as in the case of Jews, who will not eat meat unless it has been killed in a particular manner.

Physical causes would include dyspepsia; loss of appetite from constipation or from want of exercise; real obstruction in any part of the alimentary canal; and the repugnance often felt by new patients to the wholesale kind of diet afforded by a large asylum.

II. ACCESSORIES TO ARTIFICIAL FEEDING.

First amongst these must be ranked purgatives. A large proportion of patients are admitted into asylums with confined bowels. A successful attendant once told the writer that she always administered a black draught to all patients admitted to her ward, and invariably found that they were the better for it next day. Such indiscriminate treatment is not to be recommended, but the practical hint should not be disregarded.

If the patient refuses medicine as well as food, an injection may be given, but such hurried measures are not usually necessary on admission.

Dyspepsia, organic disease of the stomach, or natural loss of appetite, must be subsequently treated by the usual medical remedies.

In cases of acute asthenic mania, the patient should be kept lying down as much as possible, and sleep is to be induced by darkening the room, and by appropriate sedatives.

III. MORAL TREATMENT OF THE REFUSAL OF FOOD.

The moral treatment of refusal of food would include that by persuasions, arguments, threats, influences causing shame to the patient, and occasionally by yielding to some delusion or peculiar manner of taking food, as may be judged necessary in exceptional cases.

New patients, who have not had any long experience of asylum life, may frequently be persuaded to eat by a clever attendant. In cases of religious melancholia or of fixed delusion, persuasion rarely succeeds. A man will often take food from a woman, and a woman from a man. Some patients will only take food from some particular person; others only after the attendant has tasted every mouthful that they eat; others,

again, demand that they should have only certain kinds of food, as a vegetable diet, or that particular biscuits should be bought for them at a certain shop, which they eat almost exclusively.

Delusions are rarely overcome by argument, and in certain cases it is found to be to the advantage of both patient and attendant to yield to them.

Patients who suspect that their food is tampered with will sometimes eat eggs. Others will eat, if allowed to steal their food. Others will not eat when anyone is present, and must be left alone in a room with their food, or must be allowed to take their meals at a table separate from the other patients. Some will eat food if it is placed near them at night, and ladies, especially, may often be tempted by commencing with an anchovy sandwich, or some other dainty morsel. '*L'appétit vient en mangeant*,' it is said; and when once the ice is broken, we frequently hear no more of this troublesome symptom.

Threats and shaming the patient are sometimes useful. In cases of obstinate or hysterical melancholia the mere display of the feeding apparatus on a table is sometimes sufficient to induce the patient to eat in a natural manner. Another useful plan is to make one patient see another fed with the tube, and to inform him that he will be fed in the same way unless he takes his food. An enema of beef-tea administered to a strong man in the presence of others is a remedy that is sometimes successful. At the West Riding Asylum, where there were occasionally as many as six patients to be fed three times a day, and where time was of importance, the writer was in the habit of making the melancholiacs hold one another down to be fed in turn. After a few trials, the effect became so ridiculous that the patients used to laugh at one another, and eventually saw the folly of refusing food and took it properly.

One patient, under the observation of the writer, would never take his food unless he were allowed to lie flat on his back and were fed by the wife of one of the attendants, which was done day after day. A private patient of the writer always eats her food off a plate placed on the floor, as a dog would take his dinner.

IV. RULES FOR FEEDING BY THE MOUTH OR NOSE.

In the first place, it must be stated that we ought never to feed a patient artificially if we can possibly persuade him to take his food in a natural manner.

The question as to how long a patient may be left without food is one of no little difficulty, and of course varies in each

particular case. Speaking generally, it may be said that if a patient refuses three meals consecutively he ought to be fed.

If the pulse is thin, weak, and either too fast or too slow, and if the patient has been long without food, active measures must be taken at once. On this last point, however, you are often deceived by the patient's friends, who will sometimes state that no food has been eaten for days, and who do not consider that beef-tea, milk, or any other liquid should be called food.

If the general condition is one of emaciation, if the stomach appears to have fallen inwards, if the lips and tongue are dry or covered with sordes, and, above all, if there is an unmistakably foul smell in the breath, the indication is to feed as soon as possible.

There are two different smells in the breath of a patient who has refused food. One is the ordinary odour that is perceptible in any person's breath who does not take proper exercise or whose bowels are habitually constipated. The other is more offensive and is dependent upon the action of the gastric juice upon the coats of the stomach, proving that actual decay is going on within. It is impossible to describe these stenches—they must be smelt to be appreciated.

In many cases, however, where the patient is robust and obstinate, starvation will effect a speedy cure. But if such treatment is to be adopted, the patient must not be left for a whole day unvisited. He should be seen at least every six hours until food has been taken.

There are some symptoms which, if they do not actually forbid us to feed, should at least be taken into serious consideration. One of the most anxious positions a medical man can be placed in is where a patient is dying from refusal of food, and is yet too weak to be fed without danger of syncope.

These are generally cases of acute delirious mania, or of excitement in the course of general paralysis. The patient has, perhaps, been kept alive by the tube for some days. At last a change comes over him. The attendants try to feed with a spoon. The patient spits out all the food. The physician arrives to feed as usual, and finds that it is too late; he does not dare to do it, although wishing to do his best for the patient. The moribund condition should certainly make us pause before we administer food by any forcible method.

Other symptoms or diseases may also considerably modify our determination to feed artificially. Such are disease of the heart, severe bronchitis or emphysema, the condition of pregnancy, and especially herniæ. In one bad case under the writer's care, the straining and resistance of the patient to being fed caused an old rupture to descend to an alarming extent. A

truss was procured and applied, and the feeding process was then conducted satisfactorily.

If you decide to feed when persuasion, threats, and all moral means have failed, you should feed at once, and not keep the patient in any unnecessary suspense.*

It may be well to examine the chest, if you have not already done so, and, if possible, the fauces should also be inspected, although this may be difficult until the actual feeding has commenced. If the tonsils are enlarged, a smaller tube should be used. False teeth should be removed from the patient's mouth in a sitting posture, or they may be swallowed.

V. THE POSITION OF THE PATIENT.

This is a point upon which writers differ. When such high authorities as Drs. Bucknill † and Clouston ‡ adopt the sitting posture in an arm-chair, we may conclude that there is some good reason for recommending it. It has this advantage: if the patient vomits, there is less danger of the liquid food passing into the larynx and choking him. But Dr. Lawrence has pointed out § that there is really much less chance of vomiting taking place in the recumbent than in the sitting posture, as the abdominal muscles are then at rest.

It is the experience of the writer that it takes much longer to tie a patient into a chair than to throw a sheet over him when he is lying down on a bed; that the patient gets more bruised, and that the attendants are more likely to be injured, and that the patient can wriggle out of position much more easily in a chair than on a bed. Moreover, if the patient be sitting, the head cannot be held securely between the knees of an attendant as it could if he were lying down. There is thus more danger of the patient twisting his head round, and so getting the gag out of his mouth, an accident which exposes him to no little danger. There can be no doubt that the operator has far greater command over the patient in the recumbent than in the sitting posture, and for these reasons the writer usually feeds in that position.

A modification of the method of holding patients described by Dr. S. W. D. Williams || is the one preferred by the writer.

In ordinary case three attendants are sufficient, one for the head and one for each side. In extraordinary cases five are

* Dr. Sankey's *Lectures on Mental Diseases*, p. 47.

† *Manual of Psychological Medicine*, 3rd edition, p. 755.

‡ *Lancet*, November 30, 1872.

§ *West Riding Asylum Medical Reports*, vol. i. p. 26.

|| *Journal of Mental Science*, October 1864.

necessary—one for the head, one for each arm, and one for each leg.

The patient is placed on his back on a firm mattress. The head is to be slightly raised on a pillow. If not undressed, the patient's boots must be removed, and everything made loose round the neck. The operator should not feed till all are in position. A patient's life has been sacrificed by his being held carelessly. In the case alluded to, the patient twisted his head round, the gag came out of his mouth, he bit off the stomach tube, swallowed it and died. The attendant's hands should be as bars of iron, but the doctor's as springs of steel.

The most experienced attendant takes the head. He kneels at the head of the bedstead, on the pillow, and with his hands holds the patient's head between his knees. A soft towel must be placed between the attendant's hands and the patient's head, to prevent the ears being injured. The attendant must spread out his hands with the fingers widely separated, pressing downwards and slightly inwards, and bringing the power of the knees in by pressing them against the backs of the hands, if necessary. The attendant's thumbs should be pressed upon the patient's forehead, and not upon the malar bones, or black eyes may be caused, for the insane are easily bruised. This attendant may usually be trusted with the gag, but in severe cases another person should hold it.

A strong sheet is then, or previously, thrown across the patient's body. His arms should always be outside the sheet, or they may be accidentally knelt upon. The sheet is then drawn tightly down over him, especially at the knees, but not over the chest, which should be left unconfined. Two attendants (if there are only three) then kneel on the sheet, one on each side of the patient's knees, so that the weight of their four knees is opposed to his two. The legs are thus held tightly in their place without the least risk of injury. An attendant should never kneel upon any part of a patient, but this applies especially to the knees and elbows, which in general paralysis are liable to have enormous abscesses form on them from even slight pressure. Each of the attendants then grasps one of the patient's arms, one hand is placed on the patient's wrist, and the other presses down the shoulder.*

If five attendants are necessary, which seldom happens, the first takes the head. The second and third hold the arms, as above. The fourth and fifth kneel on the sheet at the knees, and use their hands to press down upon the legs of the patient, one hand being above and the other below the knee-joint.

* Dr. S. W. D. Williams, *Journal of Mental Science*, October 1864.

Holding the feet is useless and dangerous, as the smaller joints afford but little hold and are more liable to be bruised and injured.

It is almost needless to remark that a man should never hold a woman down to be fed. The surgeon may show the attendants the proper positions, but should not assist at the actual feeding of a woman, except by passing the tube.

The operator may or may not put on an apron to feed the patient, as he thinks fit.

VI. METHODS OF OPENING THE MOUTH AND OF KEEPING IT OPEN.

Sometimes the patient suspects the intention of the doctor, and clenches his teeth. As Dr. Williams says,* if the patient be a woman, the mouth is generally easily opened by getting her to talk.

In a difficult case of feeding under the writer's care, in which the patient was a Jewess, with extraordinarily good teeth, the mouth was opened by pouring in a mouthful of beef-tea, which made her cough and choke, and, the teeth being parted in the act, the key was quickly slipped in between them, and the mouth was easily opened.

An attendant has shown the writer another method. The attendant kneels behind the patient. The thumb and first and second fingers of each hand are brought into play on each side of the face.

The thumbs compress the nose between them, the two fore fingers raise the upper lip; the two middle fingers are pressed down upon the lower gums; and thus the mouth is easily opened.

Another way is by making pressure with the finger upon the gums at the back of the mouth, but in doing this the operator may be bitten.

Either end of a spoon may be used as a lever to open the mouth, but the teeth may easily be broken by such a proceeding.

The point of the ordinary screw-key may of course be used for the same purpose.

It has been found by the writer that, although these steel keys are the most ingenious contrivances we can use for opening the mouth and keeping it open, there is the objection to them that the prongs of the key are somewhat in the way, and often project towards the back of the mouth, and thus interfere with

* Dr. S. W. D. Williams, *Journal of Mental Science*, October 1864.

the passage of the tube. He has therefore designed a gag, intended to meet this objection.*

There are yet two instruments to be mentioned for opening the mouth.

One is the wooden wedge, which resembles the vent-peg of a beer-barrel, which was formerly used to open the mouth with. The other is the wooden gag, with a hole in it. The objections to the first are obvious, as it is a clumsy and brutal instrument. The wooden gag is objectionable, as it is very difficult to get it into the mouth. When there, the patient can easily put his tongue against the hole in it, and thus either prevent the entrance of the tube or get his tongue injured. If you do succeed in passing the tube over the tongue, which may be done by prolonged and steady pressure, you are then working in the dark, you are pushing a straight tube backwards instead of a bent one downwards, and you cannot possibly tell where it is going. For these reasons the old wooden gag should be condemned.

VII. METHODS OF MAKING THE PATIENT SWALLOW.

In spoon feeding, when you have got the liquid mouthful into the patient's mouth, he may be made to swallow by touching the back of the pharynx with the spoon, and at the same time compressing his nostrils. The nose, however, is easily abraded if this is done frequently.

VIII. METHODS OF FEEDING, AND APPARATUS.

Mouth feeding.

Not entering œsophagus :

1. Single spoon.
2. Two spoons.
3. Spoon and feeding-cup.
4. Spoon and india-rubber enema bottle.
5. Funnel inserted behind the teeth.
6. Paley's feeder.

Entering œsophagus :

7. Stomach tube { without wooden end.
with wooden end.

Accessories to stomach tube :

Stomach pump.

Funnel.

Bottle, with movable valves.

* To be obtained at Maw & Sons.

Nose feeding.

Not entering œsophagus :

1. Feeding-cup inserted into nostril.
2. Funnel inserted into nostril.
3. Enema syringe inserted into nostril.

Entering œsophagus :

4. Flexible œsophageal nasal tube.
5. Gum elastic catheter.

Accessories to nasal tube :

Funnel.

Ear-speculum.

Sponge bag attached to nasal tube.

Other methods of feeding :

By rectum.

By absorption through the skin.

Subcutaneously ?

IX. FORMULÆ FOR DIETS.*

For feeding by the mouth :

Breakfast.

Beef-tea. One pint and three-quarters.

Brandy. Two ounces.

Castor oil. Half an ounce.

Dinner (if fed three times a day).

The same, without the castor oil.

Tea.

Milk. One pint.

One egg.

One teaspoonful of Liebig's extract dissolved in cold water.

For feeding by the nose :

Milk, beef-tea, eggs, brandy, and every kind of fluid food and medicine may be used. If any farinaceous material is required, pearl barley is most appropriate, as it passes easily through the narrow pipe of Paley's feeder, or through the nasal tube.

Ground meat, meal, rice, sago, arrowroot, gruel, &c., may be passed through a large mouth tube, but not through the nasal tube.

Dr. Sankey† recommends that strong ale should be given through the tube, but this would not be suitable in cases of melancholia associated with derangement of the biliary secretion.

* From Dr. Crichton Browne, of the West Riding Asylum.

† *Lectures on Mental Diseases*, p. 47.

In private practice we must ascertain what the patient has been in the habit of taking in the way of food and stimulants. If he has been accustomed to high living, a milk or slop diet would in many instances be inappropriate. Where money is no object, champagne and turtle soup, concentrated chicken or oyster broths, and the strongest beef-tea that can be made, should be ordered.

Dr. Learved's apparatus* is probably the best that has been invented for making strong beef-tea.

Dr. Henry Blanc† has described a method of administering raw beef in a palatable form to phthical patients, which would probably be of great service in treating those suffering from so depressing a disease as insanity requiring artificial feeding.

Nutrient injection for the rectum:‡

Butter. One ounce.

Port wine. One ounce.

Beef-tea. Half a teacupful.

Another:

Brandy. Half an ounce.

Beef-tea. Half a teacupful.

Brandy injection in syncope:

Brandy. One ounce.

Water. One ounce.

X. INDICATIONS FOR THE DIFFERENT OPERATIONS OF FEEDING, AND DIRECTIONS FOR PERFORMING THEM.

In all cases where artificial feeding is necessary, the most simple method should be tried first.

We should commence with apparatus not entering the œsophagus, as, of course, there is always some slight risk to be encountered in passing the stomach tube, although the danger of this proceeding has been much exaggerated.

In cases of obstruction of the œsophagus, or where the patient is in robust health, and we wish to make the process as long and as disagreeable as possible, or if the operator is unskilled in the more difficult methods of feeding, spoon feeding is indicated.

Feeding by the single spoon requires no directions for its successful performance, but it may be remarked that the teeth are easily injured by a spoon if any force is used. In cases

* *Lancet*, January 17, 1874. To be obtained at Maw & Sons.

† *Lancet*, June 13, 1874.

‡ From Dr. Crichton Browne, of the West Riding Asylum.

where the patient spits out the food, it may be well to put the left arm round his neck to steady the head, and the left hand may be used to press up the chin and keep the mouth closed till the food is swallowed. This method is useful for half-resolute melancholiacs, who fancy that there is no more powerful mode of forcing them to eat. It may be done in the sitting posture, and has the advantage that by it all kinds of food, solid and liquid, meat and bread, can be administered.

FEEDING WITH TWO SPOONS.

The patient may either sit or lie down. The supine posture is the best. The operator opens the teeth and keeps the mouth open, with the first spoon in his right hand. With the left hand he pours a spoonful of food (which must be liquid if the patient is lying down) from the second spoon into the first. He then gently touches the back of the pharynx with the first spoon. The patient's nose is at the same time compressed by an assistant, and the mouthful is swallowed by reflex action.

A common feeding-cup or an india-rubber enema bottle may be substituted for the second spoon in the above process.

A funnel, with its tube bent at right angles, may be inserted behind the teeth, and liquid or semi-liquid food poured through it down the throat.

Paley's feeder is only a funnel with a spout shaped like a goose's bill. This spout is forced between the teeth, and when a spring is compressed the liquid flows down the patient's throat, the stream being stopped when the valve is relaxed, at the will of the operator. A glass cover allows the surgeon to see through the top of the funnel and at the same time prevents the food being spilt. In a case of excitement in the course of general paralysis, the writer used Paley's feeder. The patient shouted all the time, and the liquid nearly choked him by entering the larynx. The stomach tube was afterwards used successfully.*

APPARATUS ENTERING THE OESOPHAGUS.

The stomach tube for the mouth may or may not have a wooden end attached to it. This wooden end terminates in a *cul-de-sac*, and has two openings at the sides. The advantage of it is, that if the end of the tube when passed impinges against the wall of the stomach, the fluid is not prevented flowing on through the side holes, which are free. The

* *British Medical Journal*, May 25, 1872.

disadvantages of it are, that, not being an actual part of the tube, it might possibly become detached, and that, as the diameter of the holes is less than that of the tube itself, rice and other solid substances will not pass so easily as through a tube without a wooden end. If the tube without this appendage does impinge against the wall of the stomach, so that the food is stopped in its passage, this is easily remedied by drawing up a few inches of tubing. The tube without the wooden end is therefore to be recommended.

The stomach tube should be neither too narrow nor too broad. The broader the tube the more difficult it is to pass, but the narrower the tube the greater danger there is of its entering the larynx. A tube measuring about 28 inches in length, and $\frac{7}{16}$ of an inch in diameter outside, with a bore of $\frac{5}{16}$ of an inch, is a good size. To the upper end of the stomach tube is attached a piece of gutta-percha tubing, about 15 inches in length, and to the upper end of this piece of tubing may be affixed a stomach pump, a bottle with movable valves, or a funnel holding about a quart.

In feeding with the stomach pump it must be remembered that you press down the valve with the left hand at the same time that you press down the piston with the right. The advantage of the stomach pump over the funnel is, that more solid food can be forced through it than will flow through the funnel by mere force of gravity. The disadvantages of the stomach pump are, that the food being squirted by it against the stomach wall may irritate it and cause vomiting, especially in dyspeptic subjects; and also that the proper management of the valves is somewhat confusing during an operation already sufficiently complicated.

The writer prefers the large funnel to the pump. Into this the basin of food is upset, and simply gravitates into the stomach.

The bottle with holes or valves appears to be a good arrangement, as by it you can regulate the flow of food, and stop the process if the patient vomits.*

Before commencing to feed, the operator should ascertain that the food is not too hot or too cold, and also if it is of a proper consistency. Brandy or medicines are then added to the liquid, if necessary.

PASSING THE TUBE.

The surgeon first dips the end of the stomach tube in the warm liquid, which is better than oiling it, and takes it in his

* Dr. Manning, *Lancet*, January 11, 1873.

right hand. The last four or five inches of it should rest upon the palmar surface of the index finger. He then passes the finger and tube to the back of the pharynx, feels for the epiglottis, passes the tube over it into the œsophagus, and pushes on the tube. Some operators pass the tube without putting the finger into the patient's mouth. If this is done it is sometimes advisable to bend the last two or three inches of the tube downwards before passing it. About eighteen inches of tubing should be passed, and it should not be done too quickly. About four inches should then be drawn up, to prevent the end adhering to the wall of the stomach. If this length of tubing has passed without any obstruction, the operator may be sure it is not in the larynx. It is a good plan to have a white line painted about sixteen inches from the end of the tube, to show when enough has been passed, and this may also be done on the nasal tube.

"In passing the tube there is sometimes a little pressure required to make it enter the œsophagus, on account of its having to follow a slightly obtuse curve, and coming in contact with the bodies of the vertebræ, which become prominent if the head is held far back. This pressure may be reduced to a minimum by directing the tube a little to the left side, as the œsophagus inclines to its left, in the upper third of its course, and by moving the head forwards when once the tube has reached the entrance to the œsophagus."*

If the tube should be stopped in its course, it must be withdrawn and passed again. It should be remembered that occasionally there are real grounds for a delusion. In a case under the writer's care the patient affirmed that he could not swallow because his œsophagus was stopped up. The tube was carefully passed and a stricture was found to exist. It was treated by passing the tube as far as the obstruction and gently pumping some liquid and oily food on to it by the stomach pump. The fluid gradually dilated it, and the patient ultimately recovered. A case of death from the use of the stomach pump has been recorded from the tube passing into a stricture of the œsophagus, probably malignant, in a patient who had attempted to poison himself by laudanum.†

The tube being passed, the fluid is upset into the funnel, or injected by the pump into the stomach.

The tube is then withdrawn. It is better to hold the funnel or a basin under the patient's chin as this is being done, so that the end of the tube may fall into it, as some fluid

* Dr. Lawrence, *West Riding Asylum Reports*, vol. i. p. 20.

† *Lancet*, August 30, 1873.

always remains in the tube, which otherwise runs over the patient's nightdress.

The patient should be kept lying down when the feeding is over, as the operation generally causes no little shock to the nervous and circulatory systems. This is partly due to the struggle which almost always ensues to a greater or less extent, and to the anxiety which is frequently produced in the patient's mind by the process; and also partly to some obscure nervous connection between the stomach and the heart, through the medium of the pneumogastric and sympathetic nerves.

NASAL FEEDING.—INDICATIONS FOR AND AGAINST FEEDING BY THE NOSE.

If the patient is a lady with a good set of teeth, it is very important that on her recovery she should not find that any of them have been chipped or broken. The risk of such an accident is entirely overcome by the use of the nasal tube. Its use is also indicated in certain cases of chronic passive melancholia, where the teeth are clenched with great force, and where but little resistance is made to feeding by the nostril. In cases of severe bronchitis or emphysema, where there is much dyspnoea, it would probably be preferable to feeding by the mouth, as the mouth is capable of inhaling a larger quantity of air than the nose; and in feeding by the nostril the mouth is left free for respiration, whereas in feeding by the mouth it is partly blocked up by the tube, which is of course broader than the nasal tube.

Nasal feeding is contra-indicated in patients who possess an unusual amount of co-ordination of their muscles. In such cases it appears that the patient is able to contract the muscles at the back of the pharynx at will in such a manner as to direct the point of the tube into the larynx, and to cause alarming choking and blueness. In a case under the care of the writer, in which feeding by the nose was attempted, the patient twisted his tongue backwards behind the tube, brought it forwards between his teeth, and nearly bit it into two pieces. Fortunately a loop of the tube was seen to project out of the mouth, and it was rapidly withdrawn. The patient was afterwards fed successfully with the stomach tube by the mouth.

In feeding with the nasal tube great difficulty is sometimes experienced in passing it. This is especially the case in persons who have a sharp aquiline nose and contracted nostrils. But as the septum of the nose is on one side in most people, if we cannot pass it through one nostril we may frequently succeed with the other, without using any great force. The first passage of the nasal tube is always difficult. This is due to the

accumulation of mucus within the nares. The attendant should therefore blow the patient's nose before the tube is passed, and clear away as much of this obstructing matter as possible. At the first passage of the tube it often gets blocked up with mucus. If the food will not flow through it, it should be withdrawn, cleaned out, and re-inserted.

APPARATUS FOR NOSE FEEDING.—NOT ENTERING THE ŒSOPHAGUS.
FEEDING-CUP INSERTED INTO THE NOSTRIL.

Dr. Phillimore has published a paper* advocating the practice of feeding through the nose without the use of a tube, in which he states that no other method than that of feeding through the nostril has been practised in the Nottingham Asylum for years. The patient should be in the recumbent posture. He writes: "My plan has been and is as follows. The surgeon stands on the right of the patient, and a little behind, holding in his right hand an ordinary earthenware invalid feeding-cup, containing the nourishment. He then places the nozzle into the left nostril, closing the right with the thumb, and the left nostril with the fingers of the left hand, steadying the head at the same time between his arm and side, the mouth being left perfectly free for respiration. The head being now slightly inclined to the patient's left, the contents of the cup are allowed to trickle along the left wall of the nasal cavity into the pharynx, and thence to the stomach. It will thus be seen that there is no restraining apparatus, nor gag, œsophageal tube, pump, other machinery, nor even an extra funnel required." He concludes by saying, "The process required care, but it was successful."

FEEDING BY A FUNNEL INSERTED INTO THE NOSTRIL.

Dr. Moxey has published a paper† in which he recommends the following method: "Gently introduce a small Wedgwood funnel within, and only within, one of the nostrils, holding it there lightly and without pressure during the entire administration, remembering that it is used merely as a convenient medium to supply the food to the nostril."

* *Lancet*, November 2, 1872.

† *Lancet*, May 31, 1873.

FEEDING BY ENEMA SYRINGE INSERTED INTO THE NOSTRIL.

Dr. Hyslop has published a paper * in which he recommends for nasal feeding the use of "a good clean pint enema bag, with the nozzle cut off within an inch of the shield, and the mouth-piece of a child's feeding-bottle drawn over the nozzle."

These two last methods of feeding by the nose stand intermediate between that of feeding by the nose with only a feeding-cup and that by the funnel and tube.

APPARATUS FOR NASAL FEEDING.—ENTERING THE ŒSOPHAGUS.
FUNNEL AND TUBE.

To the upper end of the nasal tube may be affixed a funnel the size of a wine-glass or an ear-speculum. Dr. Harrington Tuke has described a case to the writer in which he, having no other apparatus at hand, fed a lady through the nose with an elastic catheter having a sponge bag filled with fluid attached to the upper end of it.

The tube itself should be either a gum elastic urethral catheter of the size of number 3 or number 6, as recommended by Dr. Harrington Tuke,† or a flexible india-rubber tube about 24 inches in length, and $\frac{5}{16}$ of an inch in diameter, with a bore of $\frac{3}{16}$ of an inch. The thicker the tube the more difficult it is to pass, but the thinner the tube the more likely it is to get into the larynx and the less easily will the food flow through it.

Dr. Harrington Tuke recommends that the gum elastic catheter should be slightly bent before it is used. It will facilitate the passage of the nasal tube if it is warmed and oiled before it is passed.

METHOD OF USING THE NASAL TUBE.

The patient is placed on his back. The tube is passed down one of the nostrils. If the patient chokes it is a sign that the tube is in the larynx. The tube should therefore be drawn up about an inch, and then pushed on again. When it passes on freely without obstruction, about fifteen inches should be pushed down the nose. The part of the tube remaining out of the nostril should then be held quite straight, in the vertical position, and there should be no bending or loops in it, or the

* *Lancet*, December 7, 1872.

† *Journal of Mental Science*, vol. iv.

food will not pass. The food is then poured into the funnel and allowed to find its way down the tube by the force of gravity. If the fluid will not flow on, about an inch of the tube should be withdrawn, as the point of it is probably resting against the wall of the stomach. If the liquid still will not pass, the tube must be withdrawn altogether and cleaned out, as it is probably blocked up with mucus.

When all the liquid has been successfully poured through the tube, the funnel may be placed under the nose as the tube is withdrawn, to catch the fluid which remains in the tube, which otherwise may run over the patient's nightdress.

The patient should be kept lying down for some little time after the operation, although there appears to be much less shock to the nervous system in feeding by the nose than by the mouth.

It may be mentioned that feeding frequently by the nasal tube causes some little swelling and tenderness of the lining mucous membrane, by which the process is rendered both painful and difficult. The tube should therefore be as soft as possible, should be well warmed and oiled, and should always be passed with the greatest gentleness and care.

There is one great disadvantage in feeding by the nose, which is, that by this method only liquid food can be administered, as the tube has a more narrow calibre than the stomach tube for the mouth.

OTHER METHODS OF FEEDING.—BY THE RECTUM.

On this method of feeding Dr. Bucknill* writes: "Nutritive enemata are not of much use, so little, indeed, that they may well be dispensed with." The writer agrees with this remark as far as it relates to the insane; but as it has come to his knowledge that a friend was kept alive solely by enemata for three weeks, who was suffering from enteritis, it must be acknowledged that it may be useful in certain extreme and exceptional cases.

Feeding by the rectum is indicated when the patient is in a nearly moribund condition, and where the resistance to feeding by the mouth would probably cause an immediately fatal termination.

It may be used as an adjunct to feeding in other ways, and it is useful when it is desired to shame a patient into taking his food in the natural manner.

* *Manual of Psychological Medicine*, 3rd edition, p. 757.

Piles, fistulæ, or any disorder of the rectum, would probably contra-indicate this method of feeding.

FEEDING BY THE SKIN.

The only method of feeding by the skin that is likely to be of any real service is that mentioned by Dr. Bucknill,* who writes : “ As an auxiliary resource we can recommend that the whole body should be well rubbed over twice a day with oil. We have known this resource of great service where inanition was threatened from constant vomiting.”

The writer has read in a novel of a bath of beef-tea being ordered for a shipwrecked mariner, who was nearly exhausted ; and in some medical paper of whisky being subcutaneously injected ; but having had no personal experience of these sensational methods of feeding, he is unable to recommend them.

Such is the treatment of the insane by artificial feeding. No paper on the subject can teach its practice so well as actually performing the operations in the wards of a large asylum. Only general directions can be given, for almost all cases of refusal of food require different treatment ; and their successful issue will depend no little upon the judicious selection or combination of the methods we have endeavoured to describe.

* *Manual of Psychological Medicine*, 3rd edition, p. 757.

ART. IX.—DIPSOMANIA.

ATTENTION has again been drawn to the prevalence and increase of dipsomania in England, and the following letter and circular has lately appeared in the medical journals :—

DIPSOMANIA.

Sir,—It is now more than twelve months since I was urgently entreated by a former patient to try to establish a Home in the environs of London for the treatment of intemperance in the upper and middle classes. I set myself the task, therefore, of ascertaining whether such an institution would be desirable, whether it would receive the countenance and aid of my medical brethren, and whether it could be made self-supporting. On all these points the evidence was conclusive and in the affirmative. That an institution devoted exclusively to this class of patients, and this only, was desirable seem proved by the fact, within my own knowledge, that many dipsomaniacs of the above classes, who would gladly avail themselves of such a Home, did one exist, are now disposed of either as inmates of lunatic asylums or of hydropathic establishments, or in the families of medical men or of clergymen, in none of which can they be treated as their case demands. The desirability was also attested by all those leading physicians and psychologists to whom I applied for information and advice on the subject, and who have kindly attached their names to the document accompanying this letter. Further testimony was met with in the "Report of the Select Committee on Habitual Drunkards." Dr. Forbes Winslow, in his evidence, expresses his belief that "if establishments were organised for the reception of persons addicted to chronic habits of intemperance, hundreds would avail themselves of these institutions, and voluntarily surrender themselves for a time to control and treatment. Such institutions are to my mind one of the great and crying wants of the age." Dr. Druitt expressed his opinion that inebriate asylums were quite as much required as lunatic asylums, and that "they would be the salvation of many."

That the Home I propose to establish would receive the countenance and aid of my professional brethren, I have every reason to believe from the letters I have received from members of the profession in different parts of the country, and from the promised support of those eminent men who have signed the accompanying letter. I am aware that many take a less sanguine view than myself of the amount of good likely to be achieved, and consider it essential that there should be a legal power of detention, and it is well known that the late Mr. Donald Dalrymple gave up his practice and entered Parliament for the express purpose of inducing the legislature to grant this power. Admitting the desirability of getting such a law passed, and the increased success in treatment that would result, yet I maintain, both from personal experience and

from the reports I have received of the working of similar institutions in America, that much more might be done than is actually accomplished, were a more systematic method of treatment pursued than has hitherto been attempted in this country; and this brings me to the last point of my enquiry, Whether the institution could be made self-supporting? On this subject I have ascertained that, provided the establishment be conducted on a sufficiently large scale, little or no risk will be incurred. To assist me in raising funds for the purpose, the Earl of Shaftesbury has kindly consented to preside at a meeting to be held in Willis's Rooms, on Thursday, the 11th of February, at three o'clock in the afternoon, and I earnestly entreat all those of my medical brethren who are interested in the subject to attend and support his lordship. Several eminent members of the three learned professions have promised to take part in the proceedings.

Yours &c.

CARSTEN HOLTHOUSE.

London: January 1875.

To Carsten Holthouse, Esq., 3 George Street, Hanover Square.

We, the undersigned, fully alive to the prevalence of this disease, and to the great want of an institution specially devoted to its treatment, are of opinion that such a one as you propose—which shall afford to its inmates the comforts of a home and the pleasures of society, while at the same time they are protected from temptation—would be a great boon both to the patients and to their families, and is well entitled to our recommendation and support.

GEORGE BURROWS, M.D., F.R.S.,
President of the Royal College
of Physicians.

THOMAS WATSON, M.D.

CHAS. J. B. WILLIAMS, M.D., F.R.S.,
President of the Royal Medical
and Chirurgical Society.

WILLIAM JENNER, M.D.

WILLIAM W. GULL, M.D.

J. RUSSELL REYNOLDS.

C. B. RADCLIFFE.

HENRY MUNRO, M.D.

WILLIAM WOOD, M.D.

H. MAUDSLEY.

G. FIELDING BLANDFORD, M.D.

WILLIAM FERGUSON.

JAMES PAGET.

PRESCOTT HEWETT.

HENRY THOMPSON.

T. HARRINGTON TUKE, M.D.

Although we agree with Mr. Holthouse that a "Home" for inebriates is very desirable, at the same time we are of opinion that the scheme will prove a failure unless it receives the support of the legislature. It is impossible for any institution to be established upon a sound footing, in which such persons may voluntarily place themselves for any specified time, except some measure is passed by Parliament empowering us to deal with this variety of disease.

A person suffering from dipsomania cannot be confined in an asylum under certificates, and it is absurd, except in cases where the mental faculties are disordered, to attempt to place

a dipsomaniac under legal restraint. It is only where mental disorder follows as a result of dipsomania, and evident signs of insanity are evinced, that any interference can be placed on a patient. When alluding to the subject, the Commissioners in Lunacy observe:—"We have considered that a Lunatic Asylum is not a place for the permanent detention of persons who have recovered the use of their reason, and are not obnoxious to the charge of unsoundness of mind otherwise than on account of the liability to run into their former excesses when restored to liberty."

Dipsomania is a disease which for many years has been attracting the attention of Government, but we regret to say without any success, and no measure enabling us to deal with this form of mental disorder has as yet been adopted. In 1834 a Committee of the House of Commons was ordered to enquire into the prevalence of drunkenness, and again in 1872, but notwithstanding a large amount of valuable and useful information was gathered together, they failed to lead to any result. In Scotland, Ireland, the United States of America, and other countries, Dipsomaniac Institutions exist, which are recognised by the various Governments, but in England, we regret to say, no such establishment is to be found. Ordinary intemperance is quite distinct from what is understood by Dipsomania, by which is meant an irresistible yearning for intoxicating drinks, existing, we regret to say, to a frightful extent in the present day among all grades of society, females being, as a rule, more prone to it than males, especially young married ladies.

In Scotland there is a provision in the "Lunacy Act 1866" which enables persons to place themselves in an asylum *on their own written application*, having obtained the sanction of the Commissioners in Lunacy. This is a very good provision, and the patients have an opportunity of thus obtaining proper treatment, and we most sincerely regret the absence of a similar provision in our own law.

In England a person can place himself voluntarily in an asylum, provided he has been a *certificated* patient any time within five years from his application to be admitted as a boarder. This provision is of little use as regards dipsomaniacs, who, beyond the insane and irresistible desire for drink, cannot be pronounced as being legally of unsound mind.

In 1865 "An Act for the better Regulation and Discipline of the New York State Inebriate Asylum" was passed, and in Section 4 we read: "Any justice of the Supreme Court, or the county judge of the county in which any inebriate may reside, shall have power to commit such inebriate to the New York State Inebriate Asylum upon the production and filing

of an affidavit or affidavits by two respectable practising physicians, freeholders of such county, to the effect that such inebriate is lost to self-control, unable from such inebriation to attend to business, or is thereby dangerous to remain at large; but such commitment shall be only until the examination now provided by law shall have been held, and in no case for a longer period than one year."

No patients are received for a less period than three months, and all are bound to observe the regulations of the institution. Any person entering the above institution voluntarily must sign a bond agreeing to abide by the rules.

The Select Committee of the House of Commons, appointed in 1872, to enquire into the general management of habitual drunkards, sat from March 8 to May 10, at intervals; and during this time many very important witnesses were examined as to their experience on the subject, among whom we may mention Dr. J. Crichton Browne, Medical Superintendent, West Riding Asylum, whose great experience among the insane is proverbial, and who is one of our greatest authorities on insanity; the late Dr. David Skae, formerly Medical Superintendent of the Morningside Asylum; Dr. Peddie; Dr. John Nugent, Commissioner in Lunacy for Ireland; Dr. Mitchell, Commissioner in Lunacy for Scotland; Mr. Balfour Browne, author of "Medical Jurisprudence of Insanity," and other works on the subject; Dr. Dalrymple, M.P., Chairman of the Committee; Dr. Forbes Winslow; Dr. Christie; Dr. Parrish, Superintendent of the Pennsylvania Sanitarium, &c. &c.

The late Dr. Forbes Winslow for many years urged on the profession and legislature the necessity of establishing Dipso-maniac Institutions; and in a small treatise on "Uncontrollable Drunkenness," he says, "I have for a period of seventeen years edited the *Quarterly Journal of Psychological Medicine*, and have unceasingly endeavoured to impress upon the public and medical mind the importance of establishing in this country asylums or hospitals for the reception and treatment of those who have unfortunately become addicted, as the effect of some form of *cerebral* disease, to uncontrollable or *uncontrolled* habits of intemperance."

We think, as the question relative to legally dealing with dipsomaniaes is now brought prominently before the public, it is desirable to give the *verbatim* evidence of the late Dr. Forbes Winslow, when examined before the Select Committee of the House of Commons in 1872.

Dr. FORBES WINSLOW called in and examined.

The CHAIRMAN: I believe you have had very long acquaintance

with insanity and intemperance amongst the upper and upper middle-classes more especially?—I have for the last thirty years of my life.

I propose to confine the questions which I am going to put to you to that class only: I am not proposing to take you into the lower stratum of the subject we have to deal with. In your long intercourse with these classes, have you found insanity resulting from intemperance to be of frequent occurrence?—In the upper classes of society, the insanity which can be clearly traced to habits of intemperance, of course, is not so great as in the lower stratum of society. It is very often associated with a morbid disposition to take stimulants to excess; but the actual insanity itself is not so easily traceable to habitual intemperance as among the lower and pauper classes of society.

But amongst the upper and the upper middle-classes with whom you have had to deal, you have come frequently in contact with those forms of insanity resulting either from or produced by intemperance?—In the middle class of society certainly a good many cases of insanity which have come under my observation and treatment have been clearly traceable to habits of intemperance.

I believe that for some very considerable time past you have entertained views upon the necessity of legislative dealing with this particular form of social trouble?—I have.

I think it will save time if you will, in your own way, communicate to the Committee what your views upon the subject are.—My opinion has been that if establishments were organised for the reception of persons addicted to chronic habits of intemperance, hundreds would avail themselves of those institutions, and voluntarily surrender themselves for a time to control and treatment. Such institutions are, to my mind, one of the great and crying wants of the age. The class of cases to which I refer are not admissible into the ordinary lunatic asylums, as they cannot be legally certificated to be of unsound mind, according to the strict letter of the law. Medical men who have to certify as to the mental unsoundness of the person prior to his being placed under legal restraint, have to state what they themselves observe as to his insanity or mental unsoundness; and unless they can detect some aberration of intellect, evidenced by hallucination, delusion, or clearly manifested disorder of the brain, such as general paralysis or softening, and unless they can insert in the document that the patient is suffering from some aberration of intellect, specifying what its form is, or detect symptoms of diseased brain, such as softening of the brain or general paralysis, they cannot legally sign the certificate. The fact of a man or woman being an habitual and violent drunkard is not sufficient to meet the requirements of the statute test, and therefore there are numerous cases which one would gladly place under restraint, and which ought to be under restraint, not only for the protection of their own lives, but for the protection of the lives of others, which cannot be dealt with. It has often happened that these cases have come before me, and I have said, it is a very sad thing to see them without having the legal power of placing them under restraint. I went down to see a nobleman not very long ago, who had been in a state of intoxication for four or five weeks; he had not been sober during that time for one day; but I could see nothing in his mental or physical

condition to justify me in advising him to be placed in a lunatic asylum. I was satisfied that the man was killing himself, and ought to be under restraint. This is a type of case which I think should be dealt with by the legislature. Where you can establish habitual drunkenness, and the patient is not inclined voluntarily to put himself in an asylum, I think the fact of his being proved to be in this condition should be sufficient to justify confinement. There are many cases of this kind that you cannot deal with. I know numbers of ladies, moving in very good society, who are never sober, and are often brought home by the police drunk. They are wives of men in a very high social position. I have been often consulted about those cases; my hands are tied; I could not legally consign them to the asylums; I have no doubt there is the insanity of drunkenness in them, but it is not the insanity which comes within the strict letter of the law. The legislature does not recognise habitual drunkenness as a form of insanity, although medical men do. Of course it is very difficult to draw the line of demarcation between what I should term *normal* drunkenness and *abnormal* drunkenness; of course there is normal drunkenness, as there is normal forms of any other vice. It is very difficult to deal with drunkenness as a vice; but when it passes the boundary line, and ceases to be a vicious propensity, whatever form it may assume, then the depraved morbid craving for stimulants is clearly traceable to the mental condition, and of course under these circumstances you may deal with the disease, or you ought to be able to deal with it. There is a morbid craving for stimulants which is clearly traceable to a brain condition; it is a form of insanity, although it is not recognised by law. A man who has had ample opportunity of observing these cases, and studying them, is able to diagnose pretty accurately the difference between normal drunkenness and abnormal drunkenness. But you may have, as I said, ordinary licentiousness, which you may see manifest in all parts of London in the public streets; that is a vice which is very difficult to deal with, except by the police; but that vice sometimes passes from the normal into an abnormal state, and the exaltation of the instincts becomes a disease, or mania. There are very many forms of insanity springing out of the indulgence of the passions.

I gather thus far from your evidence, that you do not consider the ordinary lunatic asylum the proper place in which a person should be put who is labouring under insanity the result purely of intemperance?—I think myself, in the absence of any other kind of institution, we have no other means of dealing with these cases, but I think it is a form of insanity which ought not to be associated with ordinary cases of lunacy. If we have institutions distinct and apart from ordinary lunatic asylums, and placed under a distinct course of direction, and perhaps with a different class of inspectors and directors, they would, I think, tend very much to diminish the amount of drunken insanity.

And it would tend to lessen the number of the inmates of the asylums as they now stand?—Undoubtedly, because for a certain time a man may show a morbid and a diseased craving for drink without any other symptom of mental aberration, or without any other symptom of disordered brain; but if it goes on unchecked and untreated, it must

pass into actual insanity. If we could deal with those cases in the early stage in which you have morbid, irresistible, and uncontrollable desire for drink, if you could check it in that stage, by placing the patient under strict control, and deal with him as you would deal with any other form of disease in its incipient stage, you would arrest the development of incurable forms of disordered brain. These terminate either in chronic aberration of the mind or in chronic brain disease.

Is it not the fact that as regards the dietetic treatment of the ordinary insane and of the habitual drunkard, a person drunk from an excessive indulgence in liquor, there is a difference made—that is to say, is it not the fact that a person suffering from ordinary insanity may require a considerable quantity of stimulants?—In some cases.

Whereas, where it arises from indulgence in drink, it is a great mistake to give drink?—It must not be given; it is a great mistake to suppose that injury arises from stopping the drink; it is poison that is imbibed, and you must stop the poison, and you may do so with perfect impunity.

The dietetic treatment is not the same?—No, it is not; of course there are certain forms of insanity associated with a considerable amount of vital depression, in which cases you must give stimulants.

How far do you believe that, if private institutions provided with legislative power to retain patients for an adequate period of time were established, they could be made for the upper and middle classes to pay their way, our object being of course to separate those which could be provided by the State in some shape or other from those which could be provided by private enterprise?—I believe such institutions would be a national blessing, and in many cases, I believe, they would be self-supporting. I am satisfied that I could have had under my care some thousands (I am speaking within bounds) of cases of morbid drunkenness—I might say, of insane drunkenness—which I could have placed under restraint if I had had an opportunity of doing it. I have seen the most frightful amount of loss of life, poverty brought upon families, grievous, dreadful, and dire domestic distress and sorrow, and families wrecked and ruined by not being able to deal with those cases. In fact, as I have often said, “Your husband or wife is committing suicide, and requires as much to be controlled as if they were taking belladonna, or opium, or any other form of poison.” I look on alcohol as a poison. Every means should be had recourse to to limit or restrict the sale of a poison, as you interfere with the indiscriminate sale of opium, prussic acid, or arsenic. Alcohol is not a necessary of life; it should be dealt with by the legislature as a poison. A person goes into a dram shop and takes his rum or whisky; he imbibes a poison. After a time his nervous system becomes saturated with it, and the brain itself becomes surcharged with alcohol; and, as is the case very often with chronic drunkards on examination after death, if you apply a light to the fluid in the ventricles of the brain, it ignites into a flame. You can actually distil alcohol from the brain of chronic drunkards; the brain is so saturated with the spirit, and of course the whole source of vitality becomes poisoned.

Are you of opinion, with regard to these institutions destined for the inebriate and the asylum proper, that there should be no confusion

between the two, either in the public mind or in the legislative mind?—I should keep them quite distinct. I believe that if sanatoria were established on a broad basis, and the inmates of those institutions were allowed a certain amount of rational enjoyment, and subjected to the minimum amount of restraint, and that not an offensive restraint, and had all the reasonable indulgences of life brought within their reach, thousands would go into those institutions; how long they would remain is a very different question.

Have you at all formed an opinion as to under whose control or inspection such establishments should be, because you would, of course, desire that they should be both controlled and inspected?—I think they should be subjected both to legal and medical inspection. I question very much whether, considering how overworked the present Commissioners in Lunacy are, you could fairly put under their control and supervision any institution of the kind. I think that there should be a distinct and separate board for the supervision of those institutions.

The boundary between vice and disease which Dr. Mitchell has so accurately drawn, is one which might be left to the educated mind, but which could not be left to the ordinary inexperienced person?—No; I think that a medical man who has had practically to deal with these cases has very little difficulty in coming to a right conclusion as to whether the boundary line has been overstepped; in other words, whether the condition is that of *normal* or *abnormal* drunkenness; whether it has passed from one stage into another, just as he can distinguish eccentricity in one man from eccentricity which has passed into actual insanity in another. Experience gives him an additional sense, and enables the physician to come to a right conclusion; he ought rarely to commit a mistake in his diagnosis. I am referring to the judgment of an experienced physician. There are certain symptoms that clearly indicate dipsomania, in which the morbid craving for drink springs from a disorder of the brain, and there is a craving for drink which is to be considered as a vice. I have had in my own institution a great many patients who have come voluntarily and placed themselves under treatment. Perhaps there has been a little undue straining of the law to receive them, but there has generally been some physical symptoms which you could lay hold of, such as, perhaps, general paralysis, or symptoms of some other form of organic disease of the brain, such as loss of memory and faint scintillations of aberration, so that if he can get hold of these facts, the medical man is justified then in certifying, but without that he cannot do so.

In the event of institutions such as these being established, you would of course give a power of detention for what might be deemed an adequate length of time by parties who had the control and superintendence of the institution?—I am certain that nothing good could be done for these cases unless they were kept for a considerable time under control; it is difficult to say the amount of time they should be detained under supervision; I should say twelve months, at least, would be a fair test of recovery, and even then I am not certain whether the habit could be eradicated. A man places himself under control, and is thoroughly conscious of his sad and lamentable condition; he feels the necessity for restraint; he knows that he, by his

habit of intoxication, is ruining himself and beggaring his family. He says, Here I am, take charge of me; I will remain any time you like under restraint; I surrender my free agency into your hands; and in the course of perhaps a fortnight or three weeks he is apparently well; the poison in the shape of stimulants is kept from him, and he loses the craving for it, and is apparently in possession of his senses; the craving for drink perhaps returns; perhaps it has been in existence during the whole time he has been under restraint, but has been kept in subjection. He says I feel quite well, and I want to go out; I want my liberty. You cannot restrain a man under those circumstances, unless you are legally authorised to do so; if he signs a document and says, I voluntarily surrender my freedom, and place myself in your institution for six or more months, that document would have no legal force if the man, when he was apparently restored to his senses, were to say, I will remain here no longer; I want to go. If you say to him, You signed a pledge to remain here for six months, he would say, I do not care for that document; and would tear it up just as a man would tear up his will. But if any legislative enactment provided for a contingency of that kind, we might say, You think you are well, but we do not think so, and we cannot allow you to leave until we are satisfied that this dreadful habit has been eradicated; but how to discover when the morbid desire for stimulants is really cured is a problem I cannot attempt to solve, for in the majority of cases of habitual drunkenness there is associated with it a disordered state of the brain which you do not cure; there is a disordered appetite which you do not eradicate. Although you keep the patient from drink, the craving for it is sure to return. There is no class of affections which, viewing them as mental affections, are so liable to relapse as drunkenness; you apparently extinguish other forms of mental disease, but with regard to this unhappy propensity, you never feel safe that the habit is crushed.

MR. W. H. GLADSTONE: I understand you to say that you would not advocate compulsory detention until the habit passes the bounds of mere vice, and assumes the nature of a disease?—I would not until the craving for or the indulgence in stimulants was clearly symptomatic of a mental or brain disease, or a disordered condition of the mind or brain, manifesting itself principally in a craving for stimulants; there is no doubt a form of disordered brain in which the craving for stimulants is the prominent, and very often the only symptom.

Should you say that the ordinary drunkenness among the lower classes is of that character?—Certainly not; there is an enormous mass of drunkenness in the lower classes which cannot be traced either to mental or brain disease in the right acceptation of these words. The habit of drunkenness so in many cases eventually passes into mental alienation and brain disorder, and in thousands of instances it does. The county asylums of this country are filled with such cases.

And you do not consider the term habitual drunkards includes that class?—No, I do not; I think there are habitual drunkards as well as there are habitual prostitutes, and persons who habitually indulge in any other form of vice. It is their natural and normal state.

MR. MITCHELL HENRY: Did I understand you to say that the fluid in the ventricles of the brain of an inebriate patient could be ignited?

—Yes, there have been cases upon record where the *serum* in the ventricles of the brain of a chronic drunkard has actually been ignited.

Have you ever seen that?—I have never seen it myself.

Have you ever seen anybody who has seen it?—No, I have not; it is so recorded by experienced authors; some German authors, and some French authors, have referred to it.

It has never come within your own experience?—I have never tried the experiment.

MR. AKROYD: Were you alluding to cases of spontaneous combustion?—No, I was not.

MR. MITCHELL HENRY: Do you believe that the evidence is of such a character that we can believe it?—It appears to come from very good authority. I do believe, in habitual drunkards, that the whole nervous structure, and the brain especially, becomes poisoned by alcohol; all the mental symptoms which you see accompanying ordinary intoxication result from the poisonous effect of alcohol upon the brain; it is the brain which is mainly affected. When a person takes stimulants to excess and becomes inebriated, it is in consequence of the brain being poisoned. In temporary drunkenness, the brain becomes in an abnormal state of action, and the mind in an abnormal state of alienation, and if that habit is persisted in for years, the nervous tissue itself becomes permeated by the alcohol; and organic changes take place in the nervous tissue of the brain, producing that frightful and dreadful chronic insanity which we see in our county asylums, traceable entirely to habits of intoxication. You will never diminish the amount of pauper insanity until you deal with the great question of alcohol, and by legislation prohibit as far as you can its improper sale. I look upon public-houses as great centres for the distribution of poison. There would, no doubt, of course be great difficulties in practically dealing with this question. I should, by legislative enactment, put as many restrictions upon the sale of the various kinds of alcohol as I should restrict the sales of ordinary poisons; I think alcohol should be both dealt with as a frightful source of moral and physical deterioration. The human race, morally, mentally, and socially, is, I believe, deteriorated by that poison; drunkards have drunken children. I was reading some statistics of idiots in the State of Massachusetts, where actually half the idiotic children were traceable to drunken parents; and it is the case that a large percentage of frightful mental and brain disturbance can be traced to the drunkenness of the parents, recognising the great physiological law, that "like begets like." I was looking at some statistics the other day in a list of criminals; there was "a father a drunkard, grandfather a drunkard, grandmother an idiot," and in the whole line there figures that family; they were drunkards, they were criminals, they were idiots; all the forms of vice were hereditarily transmitted.

MR. BIBLEY: What is the effect upon an habitual drunkard if he is suddenly and absolutely cut off from his accustomed stimulants?—There is a degree of vital and mental depression.

But no serious injury to the constitution itself?—I do not think so; I have never seen it.

Under what authority would you propose that an habitual drunkard

should be detained in confinement in such asylums as are contemplated?—If there is a legislative enactment dealing with these institutions, I do not think there would be any difficulty in carrying it practically into effect.

Upon medical certificates, and the authority of a magistrate?—Yes.

And then I suppose you would have those asylums under the control of the Government Inspectors or Commissioners?—Yes, certainly; and there is another provision of the law which I should like very much to see carried into effect, and it has been carried into effect with great success in some of the American States, that if you can establish a case of habitual drunkenness against a man, and prove that he is ruining his family and squandering his property, although he may not be in a condition of mind to justify his being placed in a condition of legal restraint, in certain States of America the relatives have the power of representing to a judge in the State, “This gentleman is drunk several times a week, or chronically drunk; place him and his property under the protection of the law”; and that is accordingly done.

Are you aware whether that power is abused very much?—I cannot answer that question, but I think that is a very wise provision; and I have seen in my own experience families perfectly ruined and beggared by the head of the family being a drunkard, and not being able to be dealt with. I always thought what a blessing it would be if there could be a mild provision of the law recognising the condition of recklessness or improvidence caused by drink, under which property is being squandered; and that upon the receipt of proper evidence the judge be authorised to say, I take from the control of this habitual drunkard the management of his estate, and place it under the care of persons appointed by the court, until he shows that he is fitted to manage it himself. Of course I refer to persons who are habitual drunkards, and whose mental powers are evidently impaired by drink.

The great object for us to pursue in the general management of dipsomaniacs is to endeavour to establish in them a power of self-control by firm but judicious treatment for a considerable period; and we must again contend that, for any permanent good to result from such treatment, the patients must be submitted to legal restraint in an institution *recognised* by law, and we do not anticipate, whatever the motive may be, any good resulting from the establishment proposed to be opened by Mr. Holthouse.

If in England institutions were established in which dipsomaniacs could voluntarily place themselves under restraint, they would still be free agents, at liberty to leave when they wished, and to do what they pleased whilst resident in the institution, and they could not be legally subjected to restraint. The withdrawal from *all* stimuli is the chief part of our treatment, and this cannot be effected if the person is a free agent. We must regard all dipsomaniacs as cunning in the extreme, artful, and generally unable to speak a word of truth; we

cannot trust to their honour in desisting from drink, for they have none. Public opinion is against the deprivation of a dipsomaniac's liberty, and states that any person is permitted to get drunk if he likes to do so. We have lately had an opportunity of seeing the evil resulting from our inability to deal legally with dipsomaniacs in several cases where the property has been squandered, and the family reduced to the utmost extremity of ruin and despair.

We now propose to consider the legal relations of drunkenness and dipsomania.

With regard to the legality of restraining drunkards, we contend that any person who is in a state requiring forcible detention, from whatever cause it occurs, becomes amenable to be dealt with by law. In signing a medical certificate, we are called upon to certify in the 8 and 9 Vict. c. 100, "That the said — is a person of unsound mind, and a proper person to be taken charge of and detained under care and treatment," &c. A man who is in a state of raving mania, brought on by drink, is certainly a proper person to be placed under legal restraint until the attack subsides.

The medical certificates justifying the admission into the asylum do not allow of the detention after the attack has passed away. In order to give the patient an opportunity of recovering, a statement is sent to the Commissioners in Lunacy of the mental and bodily condition of the patient; the examination for this must not be made until the patient has been in the asylum for *two* clear days, or more than seven. The patient, though raving from drink on his admission, may recover in the two days previous to the examination for "statement," and may consequently be discharged. In making the above remarks, we are conscious that we are doing so in opposition to the general opinion, but we must contend that, taking the *Act ipsissima verba*, we are empowered so to act.

Dr. Taylor, in his valuable and world-renowned work on "The Principles and Practice of Medical Jurisprudence," draws our attention to some important medico-legal enquiries relating to this matter. In the case of *Scott v. Waken*, the defendant, a medical practitioner, was sued for damages for causing the plaintiff to be restrained, who was at the time suffering from *delirium tremens*. In consequence of his violence and excitement, it was found necessary to send for a medical man. The defendant, who found the plaintiff in a most excited state, with loaded pistols in his hands, threatening to shoot his wife, and to prevent this *two* men were holding him. He was in a fit of *delirium tremens*, in a dangerous state, and quite unfit to be at large. The defendant placed a man in the house to watch

him during the night. The plaintiff, so restrained and unable to obtain any more drink, recovered from his attack next morning, and brought an action for damages against the medical man for illegally restraining him. Baron Bramwell, in charging the jury, stated that, if the medical man knew that at the time the plaintiff was a *dangerous lunatic*, and as such likely to do mischief to himself or others, restraint would be justified, not only at the moment, but until the danger had *entirely* subsided.

Notwithstanding the evidence given at this trial, the plaintiff obtained a verdict. We have read the facts of the case carefully through, and we must express ourselves astonished at the verdict. A physician finds a patient raving mad from drink, *forcibly* held down by two men to prevent violence, with two loaded pistols in his possession, sends an attendant to protect not only himself but his wife from disgrace, injury, and probably murder, and, as a consequence of the prompt action of the medical man, an action-at-law is brought against him. We are of opinion that the judge would have been justified in instructing the jury to non-suit the plaintiff, for in England *delirium tremens* is regarded and recognised as a form of insanity, and its legal relations are the same, and restraint is legally allowed, for in *delirium tremens* the brain is functionally disordered, and the person so afflicted *insane* for the time and dangerous and unfit to be at large.

Any act committed by a person whilst in a state of ordinary intoxication is valid, and it has been ruled that drunkenness is an aggravation of the offence. Sir Edward Coke remarked that "a drunkard who is *voluntas-demon* hath no privilege thereby, but what ill soever he doth his drunkenness doth aggravate it." Most of the frightful crimes and atrocities we read of are committed by persons whilst under the influence of drink, and this is often pleaded by counsel as a mitigation of the offence. It is very difficult to draw a distinction between a violent attack of drunkenness and *delirium tremens*, yet the law makes a great difference in dealing with them.

In this case the wife denied that she had given any authority for interference, and so her evidence was conflicting with that of the defendant. A medical man who is called in to a case is surely allowed to use his own discretion where evident danger is imminent. A person maniacal from drink is quite as dangerous as if suffering from acute mania, and restraint is, in our opinion, *quite* justifiable; and we consider that any practitioner who did not insist upon it would be liable to great censure.

Cases are frequently brought under our notice of persons suffering from *delirium tremens*, who have attendants placed

with them to prevent any harm incurring from violence. We remember being consulted in the case of a gentleman who had an attack of *delirium tremens*, and upon arrival at the house we found him in a state of maniacal excitement from drink. It was late in the evening, and the sole other occupant in the house was the wife. The patient was in such a dangerous state, with razors in his possession, threatening to destroy his wife, that immediate restraint was recommended, and we remained in the house until an attendant could be procured. The next morning the patient recovered, and restraint was removed; but it is our *decided* opinion that if immediate restraint had not been used, fatal results would have ensued from the violence of the patient. We will follow the history of the above case a little farther, as a proof of what we have stated. A few weeks subsequent to this, a second attack came on, medical certificates were obtained, and the patient was sent to an asylum; he recovered in a month, but his wife, contrary to the *urgent* advice of the medical officers, decided upon taking him home, the result being another violent attack, during which he killed his wife.

Such, then, would, in our opinion, be the result of most cases of *delirium tremens* accompanied with violent symptoms, if restraint were not resorted to; by restraint we mean the supervision of an attendant.

Another case, *Symna v. Fraser and Andrews*, tried at the Court of Queen's Bench, seems to us as being a positive contradiction of the verdict given in the first-mentioned case. The plaintiff was a woman who had an attack of *delirium tremens* for two years previous to the trial.

The defendants were called in to attend her professionally. A nurse was placed with her, and acted according to the instructions laid down by the medical men. The action was for placing her under personal restraint. From the symptoms mentioned in the case, restraint was justifiable; and from a careful examination and consideration of them, we are of opinion that it was a case requiring legal restraint, especially when we read of a person with the following symptoms:—A distrust and dislike of all around her, a disposition to talk incessantly, rambling speech, attempts to get out of the window, violence towards people, and a tendency to delirious delusions. The Lord Chief Justice Cockburn, who tried the case, drew a distinction between the assumption of authority and the instructions given to the attendant, and urged that the medical men would be responsible for the restraint used by nurses or attendants who were in attendance on their cases. This is no doubt true with regard to mechanical restraint used

in an asylum, where none is allowed to be used without the knowledge and sanction of the medical officers; but we cannot see in what way a medical man can be responsible for the acts committed by an attendant. In this case the plaintiff was nonsuited, the jury expressing an opinion that the restraint was necessary, and that no more was applied than what was absolutely required. This trial lasted five days.

At the commencement of the present year we read of another murder, committed by a person whilst suffering from *delirium tremens*. Here is a case where, if restraint had been used, no such murder would have been committed.

(Before Mr. Justice DENMAN.)

SHOCKING CASE OF MURDER.—*James Hayes*, 40, leather dyer, was charged upon an indictment, and also by the coroner's inquisition, with the wilful murder of his female child, aged 14 days.—Mr. Ribton prosecuted, and the prisoner was defended by Mr. Straight and Mr. Gill.—This case was one of a very painful and distressing character, and although the prisoner was placed upon his trial, as it could not be proved that he was at the present moment unable to understand his position, or in such a state of mind as not to be competent to plead to the charge, still there was no doubt that he was in a state of raving madness at the time the terrible act was committed. He resided with his wife at No. 17 Page's Walk, Bermondsey, and it appeared that he had been very ill for some time previous to the 11th of December. His mind was no doubt affected. On the night mentioned he was in bed, when he suddenly seized the child, and dashed its head against the wainscot, inflicting injuries which caused its death. An alarm was raised and several of the other lodgers rushed into the room, when the prisoner rushed at his wife, and would, no doubt, have done her some serious mischief if the bystanders had not prevented him. It was proved that before this occurrence the prisoner had been a good father and husband. He appeared remarkably fond of the child in question and his other children, and it was clear that at the time the act was committed the prisoner was in a state of raving madness, and quite unconscious of what he was doing. He was so violent that it required the united exertions of five men to restrain him, and he exclaimed that he would have killed his wife and his other children, and particularly one favourite child, "Bobby," if he could have got at them. The prisoner said he knew the back-way to Scotland, and should get there if they would let him, and he addressed the wainscot, and said there was a policeman there, although this was an entire delusion. Although more quiet, there was no doubt that the prisoner was still insane. Mr. Justice Denman, after some evidence had been given, said he had no desire to interfere with what was undoubtedly the province of the jury; but it appeared to him to be abundantly proved that the prisoner was insane at the time he committed the act of which he was accused. He at the same time told the jury that

whether the insanity was from *delirium tremens* or any other cause in law made no difference. The jury said they were perfectly satisfied, and they at once returned a verdict of Not Guilty, on the ground of insanity, and the prisoner was ordered to be detained during Her Majesty's pleasure. During the proceedings he did not exhibit the slightest emotion.

The prevalence and nature of uncontrollable drunkenness is pernicious to domestic happiness, prosperity, and to success in any profession; and in order to check the rapid progress of this horrible national calamity, we must urge expediency on the present Government to pass a Bill this session relative to the matter in question.

ART. X.—A VISIT TO ST. CLEMENT'S ASYLUM, VENICE.

THIS asylum, one of the largest in Italy, is exclusively for female patients, containing upwards of six hundred inmates. It is situated on a small island east of San Servolo, near Venice. The island of St. Clement's was formerly the dwelling-place of the hermits of Rua, and refractory priests were originally confined there. It has recently been enlarged, and at the beginning of 1873 a large asylum was opened, at a cost of two million and a half francs.

The asylum is a large, handsome, and well-constructed building; the rooms lofty, spacious, and well ventilated. The building is quadrilateral in shape, containing eleven long corridors. On each side of the building two of the corridors are used for day wards, the length of these being one hundred and thirty-five Italian metres, or about one hundred and seventy yards in length, and well lighted by means of thirty large windows. The two sides of the corridors are joined by wings eighty-five yards in length, and the floors of these are composed of handsome tessellated marble. The dormitories are equally large and well lighted, containing beds varying in number from four to thirty. An infirmary connected with the asylum is separated only from it by means of iron gates. At the time of my visit there were about fifty of the inmates in the infirmary under medical treatment. The patients were severally employed in various occupations, some working in the laundry and others at needlework. There are several small courtyards, in which about eighty of the patients take exercise at a time, and one very large courtyard, and in this I saw about two hundred and fifty patients walking about, with naked feet, and some in chains. The staff of attendants is very small, and this no doubt accounts for the free use of restraint. The principal means used for restraining patients is by thick leather straps round the waist, attached by means of chains to small manacles fastened round the feet or hands, and sometimes both. I saw some cases where considerable ecchymosis and swelling had been produced by the pressure of these chains. One patient, whose hands were chained, was able to play the harmonium without apparently any inconvenience. Many of the patients in the asylum were either chronic or incurable cases, and a considerable proportion were idiots.

During my visit I had an opportunity of witnessing the mechanical feeding of a patient who refused her food. A

catheter was passed into the nose, and an instrument called *chestone de peltron*, consisting of a large syringe with a small tube at the end, was placed in the upper end of the catheter, and the food was then forced through the catheter down the nose, the whole process occupying less than a minute, and only a few drops being wasted; but I question whether it is advisable to suddenly gorge the stomach of a patient who has doubtless fasted for some considerable time. Seclusion was sparingly used here, and I only saw two rooms for this purpose.

The asylum is supported by voluntary contributions, but there are about fifty private cases who pay at the rate of one pound per week, and who receive first-class accommodation and care. The private cases are kept distinct from the pensioners. In conclusion, it is a matter of great regret that the asylum is not subjected to official visitation. During my visit I met with the greatest courtesy from the medical officers, who were desirous of giving me every information.

I am unable to give particulars relative to statistics or other matters connected with the asylum, for being of so recent a date none have been as yet published; but hope on a future occasion to be furnished with further details for publication in this Journal.

ART. XI.—HALLUCINATION OF SATANIC POSSESSION INDUCED BY A VESICAL CALCULUS.

BY J. M. WINN, M.D., M.R.C.P., &c.

THE following very remarkable and unique case came under my care several years ago. The history and symptoms of the malady are so extremely interesting that no excuse is needed for giving them in detail.

The patient was a clergyman of the Church of England, fifty years of age, powerfully built, with dark complexion, and about five feet eight in height. His respiration and circulation were natural, tongue clean, bowels regular, appetite good. His countenance was expressive of extreme dejection. His wife informed me that there was no hereditary taint in his family, but that eighteen years previously he had an attack of a somewhat similar character, and that his present attack had lasted two years.

The mental symptoms were most distressing, and his anguish of mind seemed intolerable. He complained of being in a state of extreme wretchedness—that words were incessantly injected into his brain by Satan. He did not hear sounds, but saw the following sentences written on his brain: “I have not done with you yet,” “I am coming for you,” &c. &c., and that the agony was driving him to distraction.

After a few days he began to complain of irritability of the bladder, and occasionally of inability to retain his urine. He admitted that he had formerly passed blood during micturition. As the urine was very acid, I ordered bi-carbonate of potash, with morphia, which, for a short interval, relieved these symptoms.

He continued in much the same mental and bodily state for many weeks, his delusion of Satanic possession becoming more fixed. When his attention could be withdrawn from brooding over his own misery, his intellect was remarkably clear, and he would converse rationally and fluently on various subjects, and repeat amusing anecdotes with great felicity of expression. At times he would question me with great logical accuracy as to the nature of his delusion, and show much skill in analysing his own feelings. He also evinced great powers of observation, and knowledge of the characters of those about him. His disposition, except when goaded almost to frenzy by the hallucinations which haunted him was amiable, and his

expressions of regard for myself were couched in words almost feminine.

His mental and bodily symptoms continued without material alteration for several months. Eventually the irritation of the bladder became so great as to confirm an impression I had for some time entertained that his sufferings were attributable to a stone in the bladder, and I requested his friends to have him examined by some experienced lithotomist. They took him to Sir Henry Thompson, who, after sounding him, said he could not detect either a calculus or enlarged prostate. He diagnosed cystitis, and suggested his taking a decoction of *triticum repens*, with morphia, and, in the event of this failing, an infusion of *alchemilla arvensis*. These remedies were tried, with no benefit, and at the end of four weeks he passed blood, for the first time since he had been under my care. I now felt more than ever convinced of the presence of a calculus, and I requested that he might see Sir H. Thompson again. On sounding him a second time Sir Henry discovered the existence of a large calculus, which he subsequently removed by the lateral operation. He got well over the operation, and as he gradually recovered his strength he found, to his great joy, that not only his bodily suffering, but also his mental anguish, were both at an end. I have seen him recently, and found that he had been able to resume the duties of his profession, and was fully occupied with the care of a populous parish in the country.

REVIEWS.

1. *An Introduction to Human Anatomy.* By WILLIAM TURNER, M.B.,
Professor of Anatomy in the University of Edinburgh.

THE work under our immediate consideration is well worth the attention of all those interested in the study of anatomy; not only the student, but also the expert. Professor Turner has arranged the matter in a most concise and excellent manner, quite novel in its nature.

The term *skeleton* is considered, when used in a limited sense, to apply to the bones, and when used in a more philosophic sense, to comprise not only the osseous skeleton, but the cartilage and fibrous membranes which complete the framework of the body. The skeleton not only of man, but of various vertebrates, is most carefully discussed. The animal skeleton is first considered, consisting of the spine, spinal column; and the formula given for the vertebræ is $C_7, D_{12}, L_5, Coc_4=33$, being the number of bones found in man. The vertebræ are described in a clear and comprehensive manner, as also the anatomy of the thorax and skull.

Professor Turner now passes on to consider the "appendicular skeleton," by which is meant the upper and lower extremities. Some valuable observations are given in Chapter II. on the articulatory and muscular systems, and these are illustrated by excellent woodcuts; and an admirable description is here given of the mechanism of inspiration and expiration.

In Chapter III. the various tissues and fluids of the body are both anatomically and physiologically discussed at length, and we would draw the reader's special attention to this part of the work, as deserving of the greatest praise for the general arrangement and interest of its contents; and also to the beautiful woodcuts and drawings of microscopic structures, made by Dr. W. M. Banks, Dr. Ewart, and Mr. C. Berjean, from specimens prepared by Mr. A. B. Stirling, Professor Turner's assistant.

In Chapter V. the nervous system is described, and to this part of this admirable work we would turn our special attention.

The nervous system, we are told, consists of a number of organs, named respectively nerve-centres, nerves, and peripheral end-organs and ganglia. The peripheral end-organs are minute structures connected with the peripheral extremities of the nerves, and are situated in the skin and other organs of sense, in the glands, blood-vessels, and muscles. Nerves are *internuncial* structures, being the means of communication between the different nerve-centres, or between nerve-centres and peripheral end-organs. When a nerve connects two nerve-centres together, it is *inter-central*; other nerves are called respectively *centro-peripheral*, *periphero-central*, *motor*, *vaso-motor*, *secretory*, *trophic*, *inhibitory nerves of sensation*, and of special sense, reflex, *excito-motory*, *excito-secretory*, *excito-inhibitory*, according to their respective functions; and in some fishes which possess electrical organs, nerves named *electric* exist. The structure of nervous tissue is now minutely described,

consisting of nerve-fibres and nerve-cells. Medullated nerve-fibres are invested by a sheath of connective tissue, called the *perineurium*, giving off processes passing into the nerve, and subdividing into fasciculi or funiculi. The perineurial connective tissue investing a fasciculi presents, when treated with nitrate of silver, polygonal markings, which, as Ranvier showed, are the outlines of a layer of flat endothelial-like cells. The fibres and fasciculi lie parallel to each other in the nerves, but in the white matter of the brain and spinal cord the nerve-fibres are not arranged in such definite fasciculi as in a distributory nerve, and the connective tissue between the fibres is the soft, delicate form, called neuroglia.

A medullated nerve-fibre, if examined immediately upon its removal from a living animal, as here described, consists of a soft, homogeneous, or *glassy-looking* substance, enclosed within a living membrane. If the same fibre be examined some time after death, or after the addition of ether, acetic acid, collodion, &c., this homogeneous appearance disappears, and we see a delicate transparent membrane, the *primitive-membrane*, or *neurilemma*; also a delicate thread extending along the axis of the fibre, called the *axial cylinder*, or central band of Remak; and a substance lying between these two membranes, called the white matter of Schwann, or the medullary sheath. An excellent diagram is here given of medullated nerve-fibres, showing the double contour.

Non-medullated nerve fibres are now described as characterised by the absence of a medullary sheath. The form of the fibre consists of pale grey, translucent flattened bands, the $\frac{1}{80000}$ to $\frac{1}{80000}$ of an inch in diameter, and are homogeneous or faintly granular. Nuclei are found in the substance of the fibre, and in relation with the primitive membrane. *Nerve-cells*, we are told, constitute an important division of nervous tissue, and are the characteristic structures in the nerve-centres, being susceptible to impressions or nervous impulses. The various nerve-cells are here fully described—the bipolar, pyriform, and multipolar nerve-cells. Nerve fibres at their peripheral extremities terminate in connection with peculiar structures named *end bodies*, *terminal bodies*, or *peripheral end-organs*, which are situated in the several organs of the body, the motor nerves ending in the voluntary and involuntary muscles, and the vaso-motor nerves in the muscular coat of the blood-vessels; the sensory nerves end in the skin, mucous membranes, and organs of special sense; the secretory nerves terminating in connection with the ultimate cell elements of the secretory glands.

After a careful and interesting description of the ramification of the nerves, and their microscopic appearance generally, the writer passes on to the descriptive anatomy of the cerebro-spinal nervous system, and we must direct special attention to the description of the development of the cerebro-spinal nervous axis. The membranes of the brain and spinal cord having been carefully described, the various plexuses of nerves are treated of, and the course of each individual nerve traced from its origin to its termination, in a short but concise manner.

The brain is now minutely described, and this part of the work is illustrated with beautiful woodcuts. Some interesting remarks are made relative to the weight of various brains of insane people, one

male epileptic in which the brain weighed $64\frac{1}{2}$ oz., another 62 oz. We are told that in the West Riding Asylum, out of 375 males examined, the weight of the brain in 30 cases was 55 oz. or upwards, and the highest weight was 61 oz. in a case of senile dementia, $60\frac{1}{2}$ oz. in a case of dementia, and 60 oz. in one of melancholia.

In the same asylum, out of 300 females examined, the weight of the brain in 26 cases was 50 oz. or upwards, the highest weights being 56 and 55 oz. in two cases of mania. The size and weight of the brain do not therefore, *per se*, give an exact method of estimating the intellectual power of the individual, and a high brain weight and great intellectual capacity are not necessarily correlated with each other.

Professor Turner tells us if the adult human brain falls below 30 oz., that this low weight is not merely incompatible with intellectual power and activity, but is invariably associated with idiocy and imbecility, so that the human brain has a minimum weight, below which intellectual action is impossible. In the more cultivated races, we are told, the minimum weight limit of intelligence is higher than 30 oz. Theile records a case in the microcephalous idiot in which the brain only weighed 10·6 oz.; other similar cases are recorded as weighing 10 oz. 5 grs., and even $8\frac{1}{2}$ oz. Instances are on record in which the brains of idiots have exceeded even 50 oz. Dr. Langdon Down observed the brain of a male idiot, aged 22, which weighed $59\frac{1}{2}$ oz. In the West Riding Asylum tables, the brain weights in 10 idiots were not less than 34 oz., and in 5 cases exceeded 40 oz. The average weight in the African races of the male brain is 45·6 oz., and of the female brain 42·7 oz.; in the Australian races it is 42·8 oz. for the male, and 39·2 oz. for the female; in the Oceanic races the average weight of the male brain is 46·5 oz., and of the female 43 oz. Professor Turner draws the following conclusions from the above observations relative to the weight of the brain in the coloured races made by Barnard Davis: "1st. That the average brain weight is considerably higher in the civilised European, than in the savage, races. 2nd. That the range of variation is much greater in the former than in the latter. 3rd. That there is an absence, almost complete, of specimens heavier than 54 oz. in the exotic races, so that the higher terms of the series are not represented. 4th. That though the male brains are heavier than the female, there is not the same amount of difference in the average brain weight between the two sexes in the uncultivated as in the cultivated people's."

The average weight of the adult human male brain is 49 to 50 oz., of the female 44 to 45 oz.; the male brain being 10 per cent. heavier than the female. The average weight of a newly born male infant is 11·67 oz., the female only 10 oz. The exact age at which the brain reaches its maximum size is by some authors stated to be from the 3rd to the 8th years, but it continues to increase in weight to 25 or even 40. After 60, the brain begins to diminish in weight to 45 oz. in the male, and 41 oz. in the female brain.

The cranial nerves are now accurately described and traced, and the anatomy of the sympathetic nervous system given, the volume concluding with a description of the various organs of sense. It is impossible to speak too highly of the arrangement of the matter contained in

this work, which is clear and concise. It will become one of the leading works on anatomy, and we most highly commend it to the profession.

Professor Turner is well known as the author of various works on anatomy; and as he is associated with Professor J. Humphry, F.R.S., of Cambridge, one of the greatest anatomists and surgeons of the age, as joint-editor of the *Journal of Anatomy and Physiology*, we have constant opportunities of perusing valuable articles on anatomy. The elaborate drawings throughout the work, executed by the gentlemen previously alluded to, are deserving of the highest praise.

2. *Insanity in Massachusetts.*

WE have been favoured with the "Fifth Annual Report of the State Board of Health of Massachusetts," and it is our intention briefly to draw our readers' attention to that part of the report which has special reference to insanity in that State.

At the commencement of the chapter on Insanity, we are told that it is prominent in the State "by its frequency and persistence," and that "if the persons who are attacked with this disorder are as promptly cared for as others when attacked with fever, dysentery, and pneumonia, eighty or ninety per cent. can be restored to health and usefulness." This account of the probability of recovery of patients in the State takes us by surprise, and seems quite contradictory to our own statistics of insanity. In England the probability of recovery is at the most thirty-three per cent., and we cannot help thinking that in preparing these returns of the recoveries an error must have been unwittingly made.

The report goes on to tell us that, "if neglected, the disease tends rapidly to fix itself upon the brain, and becomes more and more difficult to be removed." Here we would draw attention to the fact that insanity, whether acute or chronic, is *per se* a disease of the brain or its membranes, and as a consequence the organ is functionally or organically disordered; however, we should be glad to be informed rather more clearly what is here meant, as it is contrary to all our accepted psychological doctrines. Insanity is as much a disease of the brain as pneumonia is a disease of the lungs; but we quite agree with the writer that it is most important to endeavour to treat the incubatory symptoms of insanity, and that much evil has resulted, and the treatment been rendered more difficult and obstinate, from failing to observe the precursory indications of mental disorder. The writer informs us that "the period of the healing power varies with many circumstances and conditions—from a few days or weeks to many years." Here, again, we must take exception to the views propounded. Insanity is never cured in a few days, and the cases referred to here, and supposed to have been cured in three days, could not have been pure cases of insanity.

It is rather a bold assertion for a writer on insanity to state generally that "the disease is not immediately destructive to life," and that "some lunatics live five, some ten, others fifteen, and a few live forty and fifty years, while suffering from their mental malady." I think here a little

classification would have been desirable, for there are some varieties of insanity which must be regarded as *immediately* destructive to life.

The cost for supporting insane patients in the State of Massachusetts is at the rate of four dollars a week, and according to the statistics the average time required to restore a patient is twenty-six weeks.

The writer now passes on to consider minutely a comparison between what a lunatic, æt. 20, who recovers in the average number of weeks, will cost the State, or if not restored, what will be the loss to the State, provided he be of a certain age, and live a certain number of years, in comparison to what the said lunatic who recovers in the twenty-six weeks, and lives for the same number of years, earning so much as a labourer.

The subject is thus summed up : The cost and the profits of healing lunacy may thus be compared, in the cases of labourers becoming insane at twenty years :

Gain, present value of his future labour	\$2,665	37
Present value of the cost of his support, if not healed	2,121	00
Total saved and gained	\$4,786	37
Cost of healing	134	00
Net gain	\$4,652	37 "

On an average, a lunatic aged twenty not recovering would entail a loss of 4,786 dollars to the State, and if recovering a gain of 4,652 dollars.

The example given above has only reference to a common labourer, without trade or profession, who earns thirteen dollars a month, besides board, which costs three dollars a week. At the present time there are 3,300 persons of unsound mind in the State, whereas twenty years ago the number was 2,630, the proportion to the population being 1 in 1,357.

The chief causes for insanity enumerated are "physical disorders and forms of vital depression," which are supposed to originate out of perversions, excesses, abuses of the mental, moral and bodily powers, especially the appetite and lower passions.

With regard to the partial abolition of restraint in the State, a paper containing a number of questions has been issued and sent to the proprietors of our asylums, for their views on the subject.

3. *Fragmentary Papers on Science and other Subjects.* By the late Sir HENRY HOLLAND, Bart. Edited by his Son, the Rev. FRANCIS J. HOLLAND. (Reviewed by HENRY SUTHERLAND, M.D., M.A. Oxon., M.R.C.P. Lond.)

WHY should we not all lead an ideal life, as did Sir Henry Holland? Why should we all plod wearily on, year after year, in the same dull groove of daily labour? How is it that we neglect to see the capitals, manners, and customs of other nations; the wonders of nature, science, and art, now so easily reached in distant foreign countries? Is it that we have not the opportunity, or is it that we have not the

will? Is competition now so keen that we cannot afford to take even our necessary recreation? Or do the very facilities of modern travel prove an obstacle to our setting forth and shaking off the dull routine of our daily business?

In truth, there is no little danger in the present age of our becoming mere working machines, if we do not make some real efforts to emancipate ourselves from the monotonous round of the professional treadmill. Surely if one of the busiest men in London was able to take his yearly holiday, and delight us with a record of its results, we might at least imitate, if only in an humble degree, this sensible example; and we may be assured that during the rest of the year our work would not suffer for it.

It is impossible to read an essay of Sir Henry Holland's, upon whatever subject, without perceiving that his general education derived from these travels abroad peeps out at every chink and loophole in his writings.

It is not intended here to describe the life of this distinguished physician, but the fact is worth recording, that many of the Fragmentary Papers, now for the first time brought together, were written during his autumnal holidays; proving that he indeed acted up to some of his favourite maxims—"Le temps c'est la vie;" and "Levata lassitudinam laboris mutatio."

It is impossible to resist quoting here a passage from Sir Henry Holland's "Recollections of Past Life," which, although somewhat foreign to our present purpose, may yet give the key-note to the means by which these essays were so happily constructed, and may also serve to incite those amongst us who are disposed to improve ourselves to go and do likewise.

Writing of the companionship of literary pursuits, he says:—

"Often it has happened to me to be alone in places where solitude was rendered somewhat severe by the hardships or hazards of the road, and by the absence of all aid, were this required. At such times, and even in the more common case of long evenings at European city hotels, I have ever found great advantage in some occupation, embracing subjects and scenes wholly alien to those around me. The articles, chiefly scientific in kind, which during many successive years I contributed to the *Edinburgh* and *Quarterly Reviews*—one in the autumn of each year—served me here in admirable stead. I chose my subject before departure (generally one familiar from previous study), read the work or works to be reviewed, methodised fairly the matter in hand, and wrote the articles at such times and occasions of my journey as accident or mood of mind might suggest; using the sea voyage, which often came at the end of my yearly travel, to put together the several scraps written on the road, and filling up after my return any gaps left by this desultory method of composition. Such breach of continuity in writing is not without its advantages. Separate parts are often better moulded together after an interval of time than can be done by continuous composition. And in revision the wise maxim of Boileau, '*Ajoutez quelquefois et souvent effacez*,' applies to prose as well as to poetry, even in those matters of pure science where human thought and speculation are dealing with the great mysteries of the universe."*

* *Recollections of Past Life.* By Sir Henry Holland, Bart. Page 36.

The "Recollections of Past Life" were published when their illustrious author was already advanced in his eighty-fourth year, and we learn from his son,* that in 1873, being then eighty-five, "My father, perceiving in himself no intellectual decline, made up his mind to bestow upon the papers this 'laborious revision,' " which is mentioned in the concluding chapters of his Recollections. This object Sir Henry Holland did not live to accomplish, but the Essays have been collected by his son, and published in the book which is the subject of this notice.

When it is stated that amongst the contents of this volume are found essays upon twenty-six different scientific subjects, all more or less abstruse, and all worthy of the deepest consideration, it may easily be understood that we have here neither time nor space to do more than glance at a few selected chapters. The essays which will probably be most interesting to the psychologist are the following: "Mental Operations in Relation to Time;" "Materialism as a Question of Science and Philosophy;" "Insanity;" and "Maury on Sleep and Dreams."

The first and last of these four are distinguished by the attempt to place clearly before us those obscure metaphysical phenomena which have hitherto been shrouded in the mysterious and uncertain verbiage of philosophy. This attempt is most successful. It shows us to what extent we can be positively certain of the nature of thought, of will, of sleep, and of dreams. It demonstrates conclusively at what point we must draw the line of our investigation, and tells us in unmistakable language that in our pursuit of unknown truths we may advance thus far and no farther.

Nobody can doubt, after the perusal of these essays, that Sir Henry Holland was a philosopher in the truest sense of the term, and that he was, moreover, possessed of a vast fund of deep original thought. Nevertheless, his researches into intellectual phenomena were moderated by that good sense and self-restraint which he recommends us to adopt in all our studies, which prevented his being carried away by pursuits which he believed to be positively dangerous to mental health, when indulged in to an excessive extent. In his numerous writings he has accomplished some useful feats in mental gymnastics, which to his mind, braced up as it was by a variety of accomplishments and occupations, were but mere child's play. Of these we shall speak in detail later on, in the hope that those who have not time to study these essays in full may be induced to carry out those experiments which are here described and recommended, and from which we may in future anticipate the most novel and interesting results.

MENTAL OPERATIONS IN RELATION TO TIME.

The point upon which Sir Henry Holland insists in this chapter is that one thought and one only can be entertained at the same moment of time. That contrary opinions have been held on this subject throughout all ages it needs no great effort of memory to demonstrate. Many familiar sayings would seem to imply that if man has not two

* Preface to the *Fragmentary Papers*, p. 6.

brains, he has at least two natures. "The spirit indeed is willing, but the flesh is weak;" "The good that I would, I do not: but the evil which I would not that I do;" "Our good and our bad angel;" and other similar expressions, seem to predicate that two opposite trains of thought can be carried on in our minds at one and the same time, and that such a condition as "association" of ideas really exists. This chapter entirely opposes such a theory. *Succession*, in however rapid intervals of time—but still *succession*, and not association—is the only explanation of certain intellectual phenomena that can be admitted. Where *apparently* two lines of thought are being pursued at the same time, this is explained by the fact that certain actions, although complicated, may be carried on automatically, when they become habitual to us; as when a person plays a difficult piece of music on the piano, and at the same time carries on a conversation with a friend. One thought must follow another. Two thoughts cannot be originated at the same moment, nor can they advance *pari passu*. All states of being, physical and intellectual, are sequent to one another. All fluxions of thought and of organic life are not only sequent but infinitesimal in degree, and are, moreover, subject to the laws of an exact periodicity in their modes of action. Sir Henry Holland believed that more may be done analytically, by taking time as a basis, than in any other way.

The connection of will with the theory of the necessity of time for the production of thought and action is next explained.

The will is defined to be "that faculty through which the mind acts upon matter without, and especially upon that body with which it individually co-exists—a co-existence so mysterious that language applied to it is but a shelter to our ignorance."

"Actions produced at first by express volition gradually assume from repetition much of the character and force of instincts." "We will to walk, to talk, to read, to write. In the child each particular part of these acts requires a special direction of mind, an effort of will. As life goes on, and they become habitual from repetition, the mind may be said to relegate a part of its power to the bodily organs. It puts them into action, stops or controls them, but has no separate consciousness of these multitudinous motions, rapid almost to continuity, methodised automatically, and synchronous for different organs." "It is on these automatic acts that I [Sir Henry Holland] believe mainly to depend the theory of a possible *absolute synchronism* of separate states or acts of mind."

"Is it not a more exact as well as simpler conception of mental phenomena to regard their connection as one of series and succession rather than of synchronous or co-existing functions?"

Next, in regard to the influence of the will upon the functions of mind, it is asked, "How far by effort of mind can we govern the sequences of thought and those great functions of memory and association through which these sequences are especially manifested?" The answer to this question is involved in much obscurity. Even the question as to whether or no we *think in words* is as yet undecided. "It is hard indeed to find any simple term wherewith to express the *potentiality* of the mind over its own operations." "Here, again, the

method of enquiry, by succession in time, seems to me [Sir Henry Holland] to go farthest in explanation of the phenomena."

The amount of power possessed by the mind in determining these successions is next discussed. And here a practical hint may be obtained by those who have the interests of insane patients at heart, although familiar enough to most psychologists.

Unbidden thoughts and emotions are to be displaced by *mental effort* or by *external causes*. These suggestions may surely be applied as a method of treating curable or alleviating incurable cases of mental disease. The physician should ascertain what bodily and intellectual exercises have been pursued by his patient in early life, and should endeavour, by proper appliances, to bring these external courses to bear appropriately upon each particular case. Attempts might also be made to restore the healthy function of mind by recommending such literary studies and accomplishments as have been known to previously interest and amuse the patient.

The power of the mind, however, in determining these mental conditions, is evidently a limited and fluctuating one.

There is great difference of different minds as regards the power of governing these sequences of state.

This faculty expresses in its degree the superiority of one man over another.

Thus it is seen that "we are speaking at once of mental operations and of the power of the mind to change and control them."

"But here, again, we are met and entangled by the new doctrine of *unconscious cerebration*;" "that succession of mental states, partly governed by the will, partly automatic from habit, or the influence of the external senses." "This hypothesis, of '*unconscious cerebration*,' supposes intellectual operations in which consciousness has no part, but which, nevertheless, evolve true logical results. Here we are called on to recognise an *exclusion* of mind from the highest function of mind."

Reverting now to the especial enquiry concerning mental operations in relation to time, it is found that it is an undoubted fact, that the operations of some men's minds are more rapid in logical sequences than those of others; that such an inequality has been shown to exist in the time required for transmission to the sensorium of actions on the organs of sense, and of volitions conveyed to the motor organs. We go but little beyond this material evidence in asserting that one mind is more rapid than another in the pure operations of thought, whether governed by the will or not.

Differences on these points occur not only in the minds of others, but in our own minds at different times. An interesting paragraph follows, showing how the operations of the intellect may be influenced by a series of mental gymnastics.

"I [Sir Henry Holland] have already spoken of the difficulty of thus turning the mind inwards upon its own acts and states. A yet greater difficulty is that of *self-experiment* upon the conditions—to try, for instance, what can be done by pure effort of will in determining the objects and sequences of thought which, in their common course, are so largely governed by automatic associations of former images and memories. An

act of recollection may in some sort be called an exercise of the mind upon itself. But I have sometimes in my own case made more explicit trial of this kind, making time a part and test of the experiment. Within a minute I have been able to *coerce* the mind, so to speak, into more than a dozen acts or states of thought, so incongruous that no natural association could possibly bring them into succession. In illustration I note here certain objects which, with a watch before me, I have just succeeded in compressing *distinctly and successively* within thirty seconds of time—the Pyramids of Ghizeh, the Ornithorhynchus, Julius Cæsar, the Ottawa Falls, the Rings of Saturn, the Apollo Belvedere. This is an experiment I have often made on myself, and with the same general result. I call it an *effort*, because it is felt as such, and cannot be long continued without fatigue.”

The observation of the acts of the adult and cultivated intellect needs to be supplemented by a knowledge of the conditions of uneducated infancy and childhood; of the intellectual imbecilities of old age; of the deficiencies and aberrations of the idiot and lunatic; of the mind of the rustic, or of the factory operative, his life a machine of manual labour. Admitting exceptions for certain forms of lunacy, we may presume the succession of mental states of perceptions, acts of reason and volitions, to be generally less rapid and their changes less various in these instances; and what tells more in the intellectual comparison, the power of the mind over its own sequent operations is feebler and less coercive. The differences may be of degree only, but they graduate between the intellect of an infant or idiot and that of a Newton or Shakspeare.

MATERIALISM AS A QUESTION OF SCIENCE AND PHILOSOPHY.

This chapter commences with an explanation of the term “Materialism.”

“The materialist argues that no material change can occur in the nervous organisation without some corresponding change in the mental functions. By no effort or artifice of thought can we dissociate these portions of our common nature so as to feel and conceive what we call Mind singly in itself.”

“The materialist finds a certain aid to his argument in the strange differences of individual minds.”

The question, however, remains unanswered: Are these differences due to different cerebral organisation? Or is this organisation but the instrument to express and put into action the diversities in a part of our being to which no material epithet or description can apply?

Is the brain, which is in man more developed than in any other animal, *in itself* capable of *generating* those wonderful functions of perception, thought, feeling, and volition, which in their totality constitute the mind of man? The answer to this question, Sir Henry Holland thinks to be that no such proof is possible, and that presumption is wholly against it. That we cannot give other explanation of the phenomena is no argument in a case where reason and consciousness are equally unable to lend any aid. Nothing that the most minute anatomy or physiology have taught us can bridge over that chasm—*hiatus infranchissable*, Cuvier wells calls it—which separates what alone

we know of the properties of matter from the functions we individually know and feel of the qualities of mind.

The view of the *incommensurability*, as it has been called, of matter and mind, of body and soul, has been held by the philosophers of every age; always embarrassed, indeed, by terms vaguely defined, such as the *νοῦς*, *ψυχή*, and *πνεῦμα* of the Greek schools, and the equivalent ambiguities of our own and other languages.

But the questions in hand are mainly the same, and the difference in dealing with them is chiefly that created by the severer methods of inductive enquiry. Abstract definitions of the soul and of matter are now submitted to tests which go far to exclude them from the pale of science.

Sir Henry Holland has concluded this essay as follows:

"I have spoken of the little that has been done by scientific discovery to furnish links between mind and matter. In one sense, indeed, they may seem to be further dissociated by those attainments of physical science which especially mark the mental capacity of man. The genius and intellectual power which have penetrated so deeply into the secrets of nature—measuring the distance of the stars and the velocity of light—predicting from the minute perturbations of one planet the existence and place of another yet unknown—detecting the presence of known terrestrial elements in the photosphere of the sun and even of the fixed stars—making electric wires, with a speed that mocks calculation, the medium of human intercourse across the widest oceans—these capacities, thus developed and exalted in their objects, point at some spirituality of nature which mere matter, in our understanding of it, can never reach. That we are unable to comprehend this nature and its complex relations to the material world is but one of the many similar confessions we are compelled to make when seeking to interpret the mysteries around us."

INSANITY.

The remarks upon insanity are very practical and appropriate.

"The many definitions of insanity are the best proof of the little of practical value which has been gained from the attempt. If broad in principle, they are lost in particular applications. If resting on individualities, these are so numerous that definitions can neither compass nor connect them. There are as many varieties of insanity as of human character, as many forms and degrees of disordered mind as of the intellectual and moral qualities in their sane state. The transitions from sanity to insanity, and the changes incident to the latter, are endlessly varied, yet even here we can generally recognise that law of continuity which so largely prevails in the world around us."

"A recent classification of the forms of insanity, by Luderdorf, of Vienna, into aberrations by exaltation, by depression, and from weakness, may be considered among the best, simply because the least definite in details."

"The subject is one so beset with metaphysical and verbal subtleties that it is hard to find firm ground to stand upon; and the only suggestion which can be offered is that of eschewing all formal definitions, and connecting the question of sanity or insanity in each particular case, as far as possible, with some specific practical test."

"One of the best as well as simplest tests of insanity is the *inversion* of some distinct habit of feeling or action, strikingly marked in the previous

character of the individual; the more sudden and complete this *inversion*, the stronger the evidence of unsound mind. Such proof can only occasionally be had, since insanity shows itself more frequently as an excess or distortion of some wonted habit or feeling. But enquiry should always be directed to this point."

The question of the material or spiritual origin of insanity, and the differences between dreaming and madness are next touched upon, and, finally, *civilisation* is said to aggravate this condition of human suffering.

MAURY ON SLEEP AND DREAMS.

No outline of this chapter can give any idea of its extreme scientific beauty. It should be read in full by all who are interested in this most thrilling subject.

Sir Henry Holland's reason for taking Maury as a text was that he had zealously devoted himself to the subject for a long series of years, having systematically made experiments upon himself. One of these was as follows:

To record a dream the moment a friend awaked him from sleep. A coadjutor was necessary, not only to awaken him, but to record the *utterances* of sleep, and such attitudes and movements of the body to be afterwards recorded in relation to the dreams.

Sir Henry Holland suggests, as the chances of error are great, and the variations of temperament might affect results, that others should make similar experiments.

With regard to sleep and dreams, they cannot be treated of separately. Still there are certain considerations which must be admitted as possible grounds of distinction. We cannot *prove* that the conjunction of sleep and dreams is absolute and universal. There may be times and conditions of sleep in which there is a total inactivity of brain—a complete absence of those images and trains of thought which form the dream.

Another distinction, moreover, exists, for although sleep is a necessity of our nature, the same cannot be said of dreams.

The repose and restoration obtained from sleep would seem to be in an inverse ratio to the intensity of the dreams attending it. Frequent experience teaches us that what we call "unrefreshing nights" are attended by troublous dreams.

Is there, then, any condition or moment of sleep absolutely devoid of dreaming? Positive proof of such a fact is wholly wanting, and the only evidence attainable is that derived from the memory of the dreamer, or the observations of those who watch him during those hours of which he has no remembrance. Aristotle puts the question why some sleep occurs with dreams, other sleep without; or, if always dreaming, why some dreams are remembered, others not.

In the memory or oblivion of dreams we trace their connection with our physical organisation, and thus gain a step, though a slight one, to the better understanding of their nature.

Lord Brougham considers dreams an incidental, not a constant part of sleep—a sort of fringe edging its borders. Sir W. Hamilton, on the contrary, believes that no condition of sleep exists without dreaming. The question remains in abeyance for future research or hypothesis to work on.

Even in a fainting fit, it may be that the memory only is annihilated, and that the mind never actually ceases in its workings.

Cases of unconscious cerebration, in which verses are said to have been made in the night, with no consciousness of the fact till they came to the morning memory, are not proved by evidence sufficiently conclusive. This question admits neither of proof nor disproof.

The practical investigation of the subject is also liable to error, which is due to the many varieties of age and of temperament. One thing, however, is certain, and that is, that sleep undoubtedly restores the vital powers. The relation of nerve force to sleep is next considered.

The velocity of the transmission of nerve force has been accurately ascertained; and this discovery warrants the hope that further research may enable us to estimate the amount or quantity of the nerve force existing at any given time.

Mr. Herbert Spencer tells us that, although the rate of repair may be as great by day as by night, the rate of loss is greater. Between this state (of sleep) and the waking state, the essential distinction is a great result of waste. We have, therefore, a right to conclude that in what is called sleep we have present a force, an agent, generated within the body, exhausted in maintaining the functions of the body, and requiring periods of rest for its reproduction in adequate amount.

A sleepless night proves the great function which sleep fulfils in the economy of life.

And, again, sleep protracted beyond the need of repair impairs the functions of the brain, and with them the vital powers.

Sleep is also not necessary to men alone, but to the lowest animals in the scale of creation. Even plants sleep. The lower animals also probably, dream, and notably the dog.

The complicated nature of sleep is next discussed.

Sleep is not one state merely, but a multiplicity and a continuous succession of states, graduating from the first yawn of drowsiness to the most profound sleep.

Such a mode of regarding sleep brings its phenomena into closer relation with those of our waking existence.

It is impossible, indeed, for anyone at all observant of the facts to regard sleep as a single or simple function. We know that all parts of the body, and more especially the organs of sense, are affected and altered by it. Every organ may be said to have a sleep of its own. These are not merely affected in different degrees, at different times, but are differently affected in degree at the same time.

Bichat thus tersely expresses these facts: "*Le sommeil général est l'ensemble des sommeils particuliers.*"

The law of continuity may possibly interpret some of these unexplained phenomena. Interruptions affect the current of our thoughts when awake, and why not also when we are asleep?

Next, as to the influences of sleep on the human economy. The refreshing effects of sleep are not to be exactly estimated. One hour in one case may comprise as much of what is true sleep as two hours or many hours in another.

The natural and simple conditions of sleep may be studied by watching the moments of passage *into* sleep and the passage *out* of it. The most interesting part of such inspection is what may be termed the *disseverment* of the will from the organs habitually acted on by it. At the moment of waking volition is more awake than the instruments through which it acts.

In dropping off to sleep, Sir Henry Holland says that three or four alternations of sleep and waking may and do occur in a single minute of time; and again, the *chronometry* of sleep, that is, the power of awaking invariably at some one determinate hour, can be only explained by the admission of the facts of *chronometry* of life.

With regard to the other varieties of sleep, it is considered that somnambulism, in common with talking in sleep, is only a gradation of state, the retention of a certain voluntary power, and not a detached phenomenon.

We may further presume that somnambulism chiefly occurs during the time when the cerebral functions are already partially awake.

The effects of opium, morphia, and other similar drugs are produced by physical causes, but no known physical law can explain them.

Trance, catalepsy, and mesmeric sleep only differ in degree from reverie and absence of mind.

They all furnish examples of that *disseverment*, so to express it, of the sensorial functions, which leave a portion of them awake, while others lie in a state of slumber more or less profound.

"As regards mesmeric sleep, is there, we may ask, any such special form or mode of sleep as that denoted under this name produced by a certain subtle influence emanating from one person, and affecting, even without actual contact, the body of another? We may say at once that neither in the sleep so produced, nor in the collateral effects assigned to it, do we find anything that has not kindred with the natural phenomena of sleep and dreams. We believe we might as well speak of sermon sleep, of rocking cradle sleep, of the sleep of an easy arm-chair, or of a dull book, as of mesmeric sleep." . . . "And with regard to the power of the operator, we may at once state our belief that no such peculiar power exists."

Sir Henry Holland condemns spiritualism as a "gross pretension," and recommends as a useful substitute, that we should all keep an honest diary of our dreams.

Dreams leave traces on the brain, the same in kind, though perhaps less forcibly marked than those impressed by the sensations, emotions, and volitions of the waking state.

A multitude of sequent states may be, and actually are, crowded into short spaces of time, and dreams, like waking thoughts, must of course be different in different minds.

Sometimes we think more rapidly as well as more vividly than at others. If this be so, we may fairly presume the same as to the conditions of dreaming in different minds.

What are the materials out of which dreams are formed? The obvious and sole answer is, from the sensations, ideas, emotions, acts, and events of antecedent life. Nevertheless, "the complete dream disregards all realities." Regarding, then, the images of dreams, however perturbed in order, as derived from those of daily life, we still have to ask the question whether this mimic imagery ever goes beyond, with inventions new to the senses. We think not. We may dream of the centaurs or the winged Assyrian bulls, as we have seen them in the British Museum, but we do not in our sleep *create* monstrosities of this kind.

All is disorder in the illusions of the night, but as the time of awakening approaches the sensorial powers are partly revived, and the dreams are more consecutive and consistent in the events they include. We may repeat our belief, that to this fact we must look for explanation of those singular stories of problems solved, verses composed, and arguments logically pursued during the hours of sleep.

Analogy is found in the wandering of the thoughts when awake. and the difficulty of remembering what we have been thinking about during the last half-hour, or during even shorter spaces of time.

It has been a question how far the course and object of dreams can be changed by external stimuli applied to the several senses of the dreamer.

That they do have some effect there can be no doubt. We have more certainty as to the influence of the internal organs on the course and character of dreams. The digestive organs more especially—disordered, it may be, by the dinner of the preceding day—betoken the *hesterna vitia* by troublous sensations and troubled dreams. Even posture, temperature, a hard or soft bed, have effect in modifying dreams. Such influences cannot be doubted, difficult though it is to bring the facts into strict evidence. Dreamland is not the land of logic or close scientific induction.

The effect of particular traits of character, of emotions and passions upon the dream, is obvious to the most careless observer. It is a saying of Sir Thomas Brown, "Virtuous thoughts of the day lay up good treasures for the night." Men act in sleep in some conformity to their wakened senses. Dreams intimately tell us of ourselves. We remember to have read a sermon—and a very able one—inculcating the examination of dreams as a means of recognising and rebuking our faults. They do, in truth, often denote not merely the grave, but also those lighter shades of character which are lost to our consciousness in the current and familiar events of the day.

Remote events, which are forgotten when awake, furnish the subjects of our dreams, as well as more recent ones, and all must have noticed that certain dreams recur to us frequently.

With regard to the relation between dreams and insanity, the following distinctions are laid down.

The one condition is normal, and periodical only; the other is abnormal, and more or less permanent.

As to the causation of sleep, it may depend upon either a congestion of the venous blood, causing pressure on the brain; or upon a lessened quantity or force of the blood, especially of the arterial blood in the vessels. It may be safely assumed that we shall never discover by what alterations in the cerebral substance dreams are originated and composed.

Actions, analogous in kind, though variously altered in operation, occur alike in the sleeping and waking brain.

The many cases where sleep, or states closely akin to it, can be produced by causes in which the circulation is little, if indeed at all, concerned, but where the nervous system is directly and powerfully acted upon, suffice to show how important is the influence of the latter in connection with these complex and ever-changing phenomena.

It has been thought advisable in the preceding remarks to endeavour to bring before the reader the chief points of psychological interest in these chapters. Space does not permit us to give a fuller or more detailed analysis. Enough has been said, it is hoped, to entice the philosopher and the alienist to seek for more connected information at the fountain-head itself.

The moderation and gentleness of spirit displayed by their distinguished author in this and in all his previous writings, completely disarm criticism. Where every sentence, paragraph, and chapter are so ably and lucidly handled, it is impossible to find fault. We can only indicate by this notice that there are certain parts of these essays which interest and amuse us more than others, and which fully justify our opinion that their author has in them maintained his well-earned reputation as a man of science, a philosopher, and a physician.

4. *The Building of a Brain.* By EDWARD H. CLARKE, M.D., Boston, Massachusetts. London: Baillière, Tindall, & Cox.

WE have read with great pleasure and interest this little book. The author during last year produced a work entitled "Sex in Education." This was very well received, and its various articles reappeared in the public press, and we now welcome another contribution from the same pen.

Dr. Clarke commences his book with a chapter on "Nature's Working Plan"; this chapter contains some very original and interesting observations upon the various races which have been born and have disappeared. Dr. Clarke says: "The Indian whom our ancestors confronted, was losing his hold on the continent when the *Mayflower* anchored in Plymouth Bay, and is now rapidly disappearing. It remains to be seen if the Anglo-Saxon race, which has ventured upon a continent that has proved the tomb of antecedent races, can be more fortunate than they in maintaining a permanent grasp upon this western world. One thing, at least, is sure—it will fail, as previous races have failed, unless it can produce a physique and a brain capable of meeting successfully the demands that our climate and civilisation make upon it."

The observations here made are deserving of praise for originality. We are told "that no perfect brain ever crowns an imperfectly developed body," but with this we must take exception; cases may be brought forward of persons, even though deformed, with most active intelligences, and, consequently, we must assume a perfect brain. Many of our leading statesmen have been deformed. Idiots who are deformed have imperfect brains; but we cannot agree with Dr. Clarke in the assertion that no perfect brain exists in an imperfectly developed body.

Part II. is devoted to a chapter on "An Error in Female Building." We have a number of replies given in answer to questions mooted in the State Report of Massachusetts.

"1st. Is one sex more liable than the other to suffer in health from attendance on school?"

"2nd. Does the advent of puberty increase this liability?"

In reply to these questions, answers to the number of 160 were received. In reply to the first question the answers were as follows:

"Females more liable than males," by ...	109
"Males more liable than females," by ...	1
"Both alike liable," by	31
"Neither is in danger," by	4
"Not in district schools," by	1
"Not if both sexes exercise alike in the open air," by	1
"Unable to answer," by	5

A number of verbatim answers are given; but it is impossible to give the substance of the replies; they are very well worth reading.

In reply to the second question:

"Yes," by... ..	120
"No," by	12
"Uncertain," by	9

Dr. Clarke concludes his work with a chapter on "A Glimpse at English Brain Building." The subjects of diet, fresh air, sleep, tranquillity of life, as met with in our English boarding-schools, are carefully considered, and compared with the life as existing in the American schools, and we are glad to say that the training of the young in every respect is superior to that adopted in America.

In conclusion, we most heartily recommend this little work, which must be read carefully through before it can be properly appreciated.

5. *Cheerful Words*, Vols. I. & II.—*A Course of Sermons specially adapted for delivery before Inmates of Lunatic Asylums.* By distinguished Divines. Edited by J. H. HYSLOP, Esq., Church Stretton Private Asylum. London: Baillière, Tindall, & Cox.

THIS collection of sermons appears to us to be specially adapted for the purpose it is intended.

It is most difficult for clergymen who officiate at Asylums to preach sermons suitable to their afflicted hearers, and great judgment is required in the selection of the subject preached. Dr. Browne has given the following judicious observations on the religious instruction of the insane: "In the employment of such an agent (religion) great difficulties occur—so great, indeed, as to discourage the most zealous of its advocates. These consist in determining the modes in which the effect may be best obtained. If its doctrines are taught to weak or perverted intellects, they may add to the confusion already existing; if its influences are brought prominently forward, they are apt to mingle with superstitious fears and delusions; if its duties alone are commented on, the doubting and ignorant may be left unsatisfied; if preaching is the vehicle, the attention may be fatigued and exhausted; if prayer, the sentiments may be strongly affected. These suppositions are all obviously founded upon the injudicious use of such an agent."

A work of a similar nature to *Cheerful Words* has long been a *desideratum* in our Asylums. The subjects chosen for discoursing upon are most suitable for the occasion, and we most heartily recommend these sermons to be adopted at all Asylums and similar institutions.

6. *Free Phosphorus in Medicine.* By J. ASHBURTON THOMPSON, Esq. H. K. Lewis, Gower Street.

THE work under our immediate consideration is written with the intention of showing the value of free phosphorus as a drug in various diseases, but more especially nervous disorders. The treatise is a most comprehensive one, and we congratulate the author on his success.

The various pharmaceutical preparations of the drug are first carefully described, also the best mode of administering free phosphorus, and its internal administration. One of the chief things we must bear in mind respecting it is, that it must not be given when the stomach is empty, and the best way of administering it is in cod-liver oil. The dose of free phosphorus varies according to the disease in which it is being administered, from one-hundredth of a grain to one-twelfth. Very good hygienic rules are given to be observed whilst the patient is taking phosphorus.

The diet must be carefully regulated, and chiefly confined to meat, with mucilaginous drinks containing a little Hungarian or Burgundy wine. Acid articles of diet, salads, cabbages, onions, horse-radish, and peas, must be avoided: these are rules laid down by Löbel, at which the author takes exception, and informs us no particular rules

are necessary during its administration with regard to the food. We are told it is contra-indicated in plethoric cases. The general effects of free phosphorus are those of a stimulant possessed of special powers on the nervous system; evanescent in its effects, but not followed by any marked stage of depression.

The various diseases are now mentioned where phosphorus has been given, with the results obtained, and cases illustrative of the subject. The drug seems to have a wonderful effect in neuralgia, in doses of one-twelfth of a grain of free phosphorus dissolved in cod-liver oil every four hours. The best means of administering the drug in combination is as phosphide of zinc.

The work is very interesting and most comprehensive, and is a most valuable addition to medicine, being evidently the result of much careful research; and we heartily recommend it to all interested in the treatment of nervous disorders.

7. *The West Riding Lunatic Asylum Medical Reports.* Edited by
J. CRICHTON BROWNE, M.D., F.R.S.E.

THESE annual reports form a valuable addition to the library of the Psychologist; the various articles are most carefully written, and the selection of them is highly creditable to the talented editor. It is our intention in the next issue of the Journal to discuss at length the interesting papers contained in the reports, which we beg now to highly commend to the profession generally.

THE JOURNAL
OF
PSYCHOLOGICAL MEDICINE
AND
MENTAL PATHOLOGY.

ART. I.—HEREDITARY DISEASE.

BY J. M. WINN, M.D., M.R.C.P., &c.

Formerly Resident Physician of Sussex House Lunatic Asylum.

THE inheritance of disease is one of the most mysterious and deplorable conditions of humanity. Any suggestions that may tend to throw light on the laws which regulate the development of hereditary diseases, with a view to their prevention or alleviation, cannot fail to interest not only the physician or philosopher, but all mankind; for how few of us can boast of an ancestry entirely free from some form of hereditary taint. How often does it become the painful lot of the physician to see some member of a family, who had given every promise of health and a brilliant career, struck down by an attack of insanity, which his friends would fain attribute wholly to some accidental cause, mental or physical, but which the experienced medical man discovers, on close enquiry, to be the development of constitutional disease, transmitted from some member of the family more or less remote. If he does not find evidence of decided insanity (for friends and relations will often take infinite pains to conceal this fact), he will probably discover that some have manifested the existence of hereditary disease in the form of phthisis, scrofula, epilepsy, &c. Having made the connection between these diseases and insanity the object of close observation and study during many years, the conviction of their having a common origin became so strong to my mind that, in 1869, I published a treatise on the subject.* Since that time extended observations have confirmed my belief in the truth of

* *Nature and Treatment of Hereditary Disease*. London: Robert Hardwicke, 192 Piccadilly.

the theory which I then advanced—that *all* hereditary diseases were mutually convertible—and convinced me that it was founded on sound principles, and supported by undeniable facts.

It may be as well to premise the remarks I am about to make, with a recapitulation of the principal arguments which I brought forward in that essay:—

1. I showed, by a series of examples, that hereditary disease frequently appears in different forms in members of the same family, and often even in one and the same individual—the disease passing from one form to another. From these facts I inferred a correlation of morbid forces.

2. The examples which I brought forward to prove a correlation of force had reference to mania, epilepsy, phthisis, scrofula, and cutaneous affections. I suggested that gout and cancer might also probably belong to the same group, but could not at that time speak confidently on the point. I have now no hesitation in including these diseases, as well as hereditary rheumatism, in the same generalisation.

3. I stated that the dissimilarity of the symptoms between some of the hereditary diseases—such, for example, as phthisis and insanity—does not prove that they are owing to different causes. Similar phenomena are traceable in the purely material world. Grove observes, “The attraction and repulsion of amber is very unlike the decomposition of water, and yet they are the same force.” I also instanced zymotic diseases as examples, presenting marked special differences, and yet subject to the same general law. The frequent occurrence of carbuncle in gouty subjects may be cited as another example of a relation between diseases that exhibit dissimilar symptoms. This is a fact to which I was, I believe, the first to draw the attention of the profession. What can *primâ facie* be more unlike than carbuncle and an ordinary attack of the gout? One an affection of the skin and cellular membrane, terminating in the death of the cellular tissue; the other, an acute inflammation of a joint, ending for the most part in resolution. The worst case of carbuncles I ever met with was that of an individual who had suffered from repeated attacks of the gout. The usual symptoms of gout had, however, been for some time in abeyance before the commencement of his fatal illness; and the carbuncular disease, of which he died, was evidently the vicarious action of the same subtle morbid force as that which had previously caused his sufferings from gout.

4. From various facts which I adduced, I drew the inference that if there be but one cause for the existence of a large class of hereditary diseases, there must necessarily be one general plan of treatment more or less applicable to the whole.

In applying the theory of a correlation of force to disease, it is necessary, in the first place, to assume what scarcely admits of a doubt, that a force of some kind is incessantly at work in disease as well as in health. Force is in operation everywhere, in the organic as well as in the inorganic world. Carlyle has quaintly expressed its universality by saying, "there is force in a rotting apple." I have provisionally termed the disease-producing force which obtains in hereditary disease, morbid. Exception has been taken to the existence of such a force: one writer considers it an improbable assumption, but surely a mere deficiency of vital force is insufficient to explain why we have tetanic symptoms from a vegetable poison (strychnine), tetanic symptoms from an animal poison, and tetanic symptoms following an injury. In these cases, as well as in epilepsy and acute maniacal excitement, the existence of a morbid force can scarcely be considered an improbable assumption.

The phenomena of recurrent insanity afford convincing proofs of the existence of a force which may remain latent in the nervous system for many months between the intervals of its manifestation. I published a case which exemplifies this fact. The patient, a highly educated gentleman, about forty years of age, and of unexceptionable moral character, was subject to attacks of recurrent acute mania of the most violent character. During the intervals his mental and bodily condition were those of a person entirely free from disease, and formed a striking contrast to his maniacal state. The paroxysms were marked by outbursts of uncontrolled passion, violent gestures, and the use of obscene and blasphemous language. After the lapse of a few weeks this terrible commotion would subside, leaving the patient calm and rational. It was like the clearing of the atmosphere by a thunder-storm, and supports the theory that there were latent morbid forces in the system, which became developed by some exciting cause, leading to a disturbance of the nervous centres, somewhat analogous to electrical phenomena. The same argument applies with equal force to epilepsy. The two diseases are so often associated in the same individual, that it is impossible not to infer a similarity of origin. An attack of epileptic convulsions bears a strong analogy to one of acute recurrent mania. After an interval of apparently perfect health, the patient is seized with a paroxysm of what may be termed intense nervous excitement. In one the paroxysm lasts for weeks, in the other generally for a few minutes only. In both we witness the accumulation of a force, which expends itself in the one instance in maniacal violence, and in the other in convulsive movements.

In the course of my practice I have constantly found

insanity supervene on the subsidence of disease of the lungs, and, in the same manner, phthisis has followed the recovery from various forms of mental disease. The way in which I have seen skin disease alternate with attacks of insanity is still more striking. These and similar facts strongly suggested to me a correlation of force in hereditary disease. Before this can be established, it is necessary to prove this mutual convertibility. It is not sufficient to give instances of one disease passing into another, we must demonstrate a see-saw sort of action. In my essay to which I referred, I gave several examples of the remarkable manner in which the various phases of hereditary disease passed backwards and forwards, either in the same individual, or in various members of different generations of the same family. Subsequently to the publication of these cases, I forwarded, on May 21, 1870, a letter to the *Medical Times and Gazette*, containing cases illustrative of my theory, which I will briefly repeat :

Mrs. —, aged forty, had been troubled with psoriasis for many years. The rash disappeared, and she became acutely insane. On the subsidence of the maniacal attack the psoriasis reappeared.

Three children in one family were afflicted with hereditary disease ; one was the victim of epilepsy, another of phthisis, and a third of insanity. Their aunt and two cousins died of phthisis.

Mr. —, aged 24, was sent to a warm climate on account of decided symptoms of phthisis. Whilst abroad the disease was arrested, but was followed by an attack of acute mania.

Miss —, aged 19. This was a case of religious mania, succeeded by phthisis.

Miss —, aged 25. Scrofula, followed by suicidal mania.

Miss —, aged 27. Chronic monomania of suspicion. Her uncle died of phthisis.

Count — became insane late in life and died in an asylum. His daughter suffered severely from scrofula, and subsequently died of phthisis.

Mr. —, aged 25. Profound melancholia. This gentleman was one of a very morbid family. One of his sisters died of phthisis. Two brothers died of phthisis. Two sisters died insane, and another was exceedingly eccentric. The mother died of pulmonary consumption.

Mrs. —, aged 33. A decided epileptic. Her father and mother are dipsomaniacs.

Miss —, aged 14. Epileptic. Her uncle died of phthisis.

Mr. —, aged 18. Psoriasis of head and face. Father died of phthisis.

Miss —, aged 12. Severe eczema of the scalp and neck. Mother died of cancer.

Master —, aged 7. Dry eczema of the face &c., of two years' duration. His mother has been subject to melancholia for upwards of four years, and his grandfather was a martyr to gout.

Miss —, aged 18. Melancholia, of many weeks' duration. Several of her family have suffered from scrofula.

Miss —, aged 20. Religious melancholia. Father is a very gouty subject.

Miss —, aged 24. In this case maniacal excitement and rheumatic fever occurred alternately.

Mr. —, aged 40. Incoherent mania of more than ten years' duration. His sister died of cancer of the œsophagus.

Cases like these can be multiplied to almost any extent, and all medical men connected with asylums have met with them, the most frequent being the relation of insanity to phthisis. The cases I have enumerated are sufficient to prove the truth of the doctrine that there is a correlation of force in disease. With respect to the nature of this mysterious force, it can no more be explained than that of any other force—we can only know it by its effects. All that medical science can do is to determine the laws by which it is governed. The present state of our knowledge will not admit of its being considered identical with physical force. As it is destructive of life, and therefore opposed to vital force, I have called it morbid. It is conceivable that infinitesimally minute particles of matter endowed with morbid energy, transmitted to the ovum at the time of conception, might lie dormant in the system until developed by some exciting cause. We can thus form some notion how disease may be conveyed from grandparents to grandchildren, without any manifestation of its existence in the intermediate generation.

That a terrible force may be dormant in the system for an indefinite time, is shown in the effects produced by the bite of a rabid dog.

Since the appearance of my treatise the tendency of thought amongst medical men has been in the direction of my theory. Nine months after its publication in October 1869, Mr. Jonathan Hutchinson read a paper at a meeting of the Hunterian Society on "Some of the principal diatheses, and their mutual relation," in which he argued that gout, syphilis, scrofula, cancer, bronchocele, darts, &c., have common properties. This group (although syphilis is mentioned, which I do not include in my category, and insanity is omitted) bears a very close resemblance to mine. Mr. Hutchinson classifies these diseases under the head of diathesis, which he considers different from dyscrasia or temperament; but all these words are vague, and

do not convey to the mind the same clear idea that is expressed in the term, correlation of force.

In Drs. C. J. B. and C. T. Williams's work on pulmonary consumption, published in 1871, I find it stated that gouty and asthmatical patients often produce phthisical offspring.

In the number of the *Medico-Chirurgical Review* for July 1875, the writer of an article on Heredity says: "The practice of endeavouring to establish a law of heredity, by pointing out the liability of certain families or communities to certain classes, though not to the same class of diseases, is prevalent in the present day, and we have elaborate treatises and tables to prove that scrofula, phthisis, gout, rheumatism, convulsive affections, and insanity frequently affect members of the same family or their collateral connections, with the implied or appended inference that they are congeneric affections, and though separated so widely by the tissues involved, and the nature and event of the maladies themselves, they may be traced to a common factor in hereditary tendency." I am not aware that "the practice of endeavouring to establish a law" that "scrofula, phthisis, gout, rheumatism, convulsive affections, and insanity" are "congeneric affections" was prevalent before the appearance of my essay; and, although the writer has not mentioned my name, I can scarcely help concluding that it is my theory to which he refers. He denounces the theory as improbable; nevertheless he cannot deny the truth of the induction, or ignore the facts on which it is based.

With respect to the origin of hereditary disease, which seems to be involved in impenetrable obscurity, the oldest historical works give us scarcely any information. The earliest records refer to insanity and epilepsy. All we can say is, that they must have had a beginning. The variety of races, however, shows how peculiarities in the physical conformation of the parents, induced by peculiar habits, have been transmitted to their offspring; and in the same manner we may infer that disease engendered by vicious courses in our progenitors may be entailed on their descendants.

I will now proceed to re-consider some points in connection with the treatment of hereditary disease, to which I referred in my treatise, and which involve the two deeply important questions of hygiene and marriage.

Where there is reason to suspect a tendency to hereditary disease, hygienic treatment cannot begin too soon. It should commence with the earliest period of infancy, for it often happens that the symptoms of constitutional disease are exhibited soon after birth, and often they are manifested before the period of dentition, in the form of convulsions, or some

other affection of the nervous system. The brain and nerves of infants being proportionally larger than those of adults, will, to a certain extent, account for their proclivity to nervous disease. If my conjecture be correct, that it is in the nervous system that the morbid force is located, it is to be expected that infants, from this preponderance of nervous tissue, should be especially liable to convulsive disease.

The first consideration that demands our attention is the nourishment of the infant. It is of the greatest moment that it should have the food which nature has provided for it in the mother's breast.* Even if the mother is supposed to belong to a family in which some form of hereditary disease has been manifested, I do not think it an objection to nursing, provided she be strong and has plenty of milk; for there is no ground for believing that the class of hereditary diseases to which I have referred can be communicated, like syphilis, through the secretions of the mother. If the mother should not have the power of suckling her child, a healthy nurse should be provided.

The three other great requisites for an infant's health are air, warmth, and bathing. It must be warmly clad, and taken out into the open air whenever the weather permits.

Education should begin with the first dawn of intelligence. The child must be managed with firmness, combined with tenderness. Nothing is more prejudicial to its future health, both bodily and mental, than the capricious behaviour of those parents or guardians who are over-indulgent at one time and needlessly severe at another.

It would be out of place here to enter at any length into the subject of education, but it is desirable that a few words should be said on the danger to mental and bodily health arising from the too prevalent practice of over-exciting the brain by a variety of useless studies. It is an established fact that precocious children are often scrofulous; parents are delighted with an early exhibition of talent, and take a fond, foolish pride in displaying the accomplishments of their child, not knowing that they are thereby stimulating a brain already morbidly active, and are disposed to keep him at his books and studies when he ought to be romping with his companions in the playground. The same attention to hygienic rules is

* It is a deplorable fact, in which I am borne out by a medical man engaged in an extensive obstetric practice in the West End, that it is quite the exception for fashionable mothers to suckle their infants. The *Saturday Review* for July 24, 1875, contains a satirical and well-timed article, entitled "The Modern Mother," in which the writer says, "From the first the mother in the well-to-do classes acts much the part of the ostrich with her eggs. She trusts to the kindly influence of external circumstances, rather than to her own care, to make the hatching successful. Nurses, governesses, schools, in turn relieve her of the irksome duties of maternity."

required as the child advances in years, and especially during the period of puberty. The modern institution of competitive examinations has been the means of seriously injuring the health of many an ardent youth who had not stamina enough to bear the intense application necessary for such an ordeal. I have been consulted in many cases where constitutional disease has been developed by this forcing system.

The most critical period of life for those who are liable to hereditary diseases, especially epilepsy or phthisis, is the interval between the ages of fifteen and twenty-five. This fact shows the importance of controlling the sexual passions at this important epoch; but long after this period it will be necessary to follow the general precautions I have recommended.

From long observation, I have come to the conclusion that there is a numerous class of persons disposed to hereditary maladies who would have escaped disease, had they been careful to choose the profession or vocation best suited to their constitutional powers. No one can command the circumstances of his position, and no care on our part can secure us from the various accidents, and moral shocks, which are inseparable from the condition of humanity; but as it is generally an apparently accidental cause that determines the particular form that disease assumes, it should be borne in mind that if a person disposed to hereditary complaints is exposed to the debilitating effects of impure air, and in-door employment, it will probably be the lungs that will suffer; if, to the wear and tear of an anxious profession, or if impelled by an eager desire for literary fame, he over-exerts his intellectual faculties, he is more likely to become the victim of some brain affection. It is therefore most desirable that he should cultivate a taste for all such pursuits and employments as should keep him constantly in free exercise in the open air, and give occupation for the mind, without excessive fatigue. The benefit of change of climate cannot be too strongly insisted on. Many years ago I was called to attend a gentleman, apparently sinking fast from the effects of phthisis. As a last resource, I sent him to a warm and dry climate in the south of Europe. He perfectly recovered, and lived abroad for about twelve years in the enjoyment of good health. He then returned to England, when he soon after became insane, and it was found necessary to place him in an asylum. This case not only displays the advantages of change of climate, but also gives a striking example of a mutual relation of morbid forces.

In selecting a climate, it is necessary to fix on a *dry* as well as warm atmosphere. Dr. Crisp read a valuable paper at a meeting of the St. Andrew's Graduates' Association, "On the

influence of a moist atmosphere in the production of pulmonary consumption," giving an analysis of 623 cases in various parts of England and Wales, to show that phthisis prevails mostly in places where not only the atmosphere, but the air is moist, and most especially "where there is a want of the free circulation of air, from the presence of woods, houses, bad drainage, &c." One of the greatest advantages of a warm climate is, that it enables an invalid to be almost constantly in the open air without risk of cold.

Regular daily exercise in the open air—either walking, riding, or driving, according to the strength of the patient—is perhaps the most powerful therapeutical agent in the class of diseases under our notice. In insanity, phthisis, scrofula, and epilepsy, it is generally admitted to be of immense value. Many years ago, an empiric gained great celebrity for his cure of epilepsy. His plan was simply to order his patients to walk a considerable number of miles every day. Now, making allowance for the benefit which his patients derived from faith in their adviser, we may conclude that the success lay, in a great degree, in the far larger amount of outdoor exercise which they were induced to take, than most people can be prevailed on to try.

Whilst on the subject of prophylactic treatment, I must add a few words respecting the great value of cod liver oil, which seems to stand somewhat in the same relation to hereditary, that quinine does to zymotic disease. Its utility in scrofula, phthisis, and cutaneous diseases is universally admitted. Although we cannot explain its *modus operandi* by any chemical theory,* its beneficial effects as an alterative are unmistakable.

It is a great mistake to administer this remedy in large and nauseating doses, and I have never found it necessary to give more than one teaspoonful at a time.

It is also an error to think that glycerine, cream, or any other kind of oil can be used as a substitute for cod liver oil. The prevalent notion that it acts chiefly as a nourishing article of food has often led to the neglect of its use, when the disease is not attended with loss of fat and muscle. I have found it act as a cure in skin disease, where the robust and plethoric

* The following singular fact I found recorded in the second volume of *Saint Paul's Annual* for 1872, relating to the birds of the Hebrides, by Mr. Robert Buchanan, on the authority of Mr. Graham. He states that he reared some young stormy petrels *solely* on "cod liver oil, which they sucked from a feather dipped into it, clattering their beaks and shaking their heads with evident satisfaction." This fact shows that, apart from its medical virtues, cod liver oil possesses a wonderful power of sustaining life, which cannot be reconciled with the commonly accepted chemical theory of nutrition.

condition of the patient would have contra-indicated its use, were it a dietetic remedy.

As an auxiliary for arresting hereditary disease, I think that issues and small open blisters, once so much in vogue, should not be overlooked; combined with cod liver oil, they are often of the greatest use.

The subject of marriage is one in which the health and happiness of mankind is so much involved, that it demands the earnest attention not only of medical men, but of all mankind. Nothing can be more difficult to determine than the degree of moral and social responsibility which is incurred in the marriage of those who are conscious that they are themselves the victims of hereditary taint, or at least are members of a family whose ancestors or relatives are known to have been so. There cannot be a doubt as to the danger of two individuals marrying, where there is hereditary taint on both sides. It is not necessary, if the view that I have introduced be correct, that the form of disease exhibited should be precisely the same; it is sufficient that it belongs to the same class.

The ordinary rule of hereditary transmission is from the parents uninterruptedly to the children, and from them to the grandchildren, frequently with an interruption from the grandparents to the grandchildren. Sometimes the taint is communicated indirectly to the collateral branches.

When I have been consulted as to the advisability of an individual's marrying into a family of which one or more members have suffered from constitutional disease, I have thought it best to lay before him, for his guidance, the following rules, which I drew up and published, with a view to estimate the different degrees of risk which would be incurred as to the transmission of disease, with reference to the various degrees of relationship.

1. If there be a constitutional taint of any kind in either father or mother on both sides of the contracting parties, the risk is so great as almost to amount to a certainty, that their offspring would inherit some form of disease belonging to the class to which these investigations refer.

2. If the constitutional disease is only on one side, either directly, or collaterally through uncles or aunts, and the contracting parties are both in good bodily health, the risk is diminished one-half, and healthy offspring may be the issue of the marriage.

3. If there have been no signs of constitutional disease for a whole generation, we can scarcely consider the risk materially lessened, as it so frequently reappears, after being in abeyance for a whole generation.

4. If two whole generations have escaped any symptoms of hereditary disease, we may fairly hope that the danger has passed, and that the morbid force has expended itself.

It must be borne in mind that I do not include in these rules any cases of phthisis, insanity, &c., which may have been produced by accidental causes.*

And here I come to the consideration of a vexed question, which bears strongly on the subject before us. It is one that has been regarded as a fruitful cause of disease: I mean the intermarriage of blood relations. Perhaps the true reason why near consanguinity is deemed an objection to marriage, and why it is so often followed by ill effects, is, that if there should be any latent morbid force in the constitution of either of the parties (both of whom are derived from a common ancestor) which may have been lying dormant for one or two generations, there would be, I believe, in the event of such a union, a double amount of probability that the old hereditary disease would reappear in some form in the offspring. If this solution of the matter be the true one, we may infer that where there is no hereditary tendency to disease, and both individuals are in perfectly sound health, there can be no fair or reasonable ground for objecting to the marriage of cousins. On this subject, however, opinions are conflicting. A friend of mine, a gentleman who has devoted much attention to social questions, has obligingly given me the result of his observations on consanguineous marriages. He resides in a locality which, from its insular position and the fact of the inhabitants having intermarried for many generations, affords especial facilities for studying this point. He writes:—"In many cases more than in ordinary marriages, first cousins have no children. 'Le sang ne se marie pas,' is a common saying. Where children are born they are generally females, and for the most part die young—fortunately so, for they are usually weak in mind as

* Feuchtersleben, in his work on *The Principles of Medical Psychology*, translated by the Sydenham Society, gives it as his opinion that one-half of the cases of insanity that are met with owe their origin to hereditary causes.

With regard to the frequency of hereditary phthisis, the late Dr. Theophilus Thompson, in his *Clinical Lectures on Pulmonary Consumption*, after referring to his statistical tables, says: "You will learn that amongst a thousand patients questioned on the subject, above one-third mentioned have lost one parent by it."

I am inclined to believe that hereditary disease is much more frequent than is generally supposed, and that a vast number of cases of insanity that have been attributed to some moral or physical shock, which has apparently produced them, are really only the manifestations of latent disease brought into existence by external accident. This applies to puerperal mania. In 1854 I read a paper before the Medical Society, afterwards published in the *Psychological Journal of Medicine*, in which I observed that the term puerperal mania, used in a *specific* sense, had led to serious errors. As an expression of a mere variety of insanity, it was sufficiently distinctive; but puerperal mania was not a *special* form of insanity requiring a treatment entirely different from that of mania in general, &c.

well as body. Where sons are born they have generally a strong tendency to take stimulating drinks."

On the other hand, a note appeared in the *Lancet* for February 26, 1870, in answer to an enquiry respecting the advisability of the marriage of cousins, in which the writer observes:—"The matter as we understand it may be stated thus: the marriage of cousins, provided both are healthy, has no tendency to produce disease in offspring. If, however, the cousins inherit the disease or the proclivity to disease of their common ancestor, their children would have a strong tendency to this disease, which might be fostered or suppressed by circumstances." This agrees with the opinion I have given above, which appeared in my treatise published in 1869.

After all, it may be argued that it is of little avail to give prudential rules respecting marriage where the affections are strongly engaged, and that the stamping out of hereditary disease is a Utopian notion; but medical science should *aim* at a high ideal, and it is the province of the physician to point out the best means of preventing physical evils, as it is that of the moral philosopher to exhibit the disastrous consequences of a violation of moral laws.

Whether the rules I have suggested concerning marriage be adopted or not, there can be no doubt that hygienic means have done much to arrest and alleviate hereditary disease. A medical man is often rewarded for his care and attention by seeing delicate children grow up strong and healthy men and women, the morbid force either expending itself or continuing latent. Sometimes, if disease cannot be eradicated, a favourable change of type occurs; a grave malady being transmuted into one of a less fatal character. One case of this kind especially recurs to me—that of a professional man, who was very delicate in his youth, and subject to hæmoptysis. In after years he became subject to attacks of gout. He is now in his ninetieth year, and able to ride on horseback and attend to business, although still occasionally laid up with gout.

ART. II.—ARACHNOID CYSTS.

BY J. CRICHTON BROWNE, M.D., F.R.S.E.

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OF the pathological changes that present themselves to observation in the post-mortem theatre of an asylum, there are few more striking or distinctive than those membranous bags or films that have been designated arachnoid cysts. Lining the dura mater, and covering the surface of the hemispheres, which they sometimes compress to no inconsiderable degree, they are calculated, by their situation, by their glistening surface, their variegated tints, their essentially morbid appearance, to impress and dwell in the memory. Once seen they are not easily forgotten, and once pictured in the mind's eye by the aid of an accurate description, there can be but little danger that when thereafter encountered they might be mistaken for anything else. Descriptions of such cysts abound in the records of most asylums, and it may be well to open what I have to say regarding them by quoting a description from the archives of the West Riding Asylum, selected not because it is unusually precise or excellent, but because it is the first that comes to hand, and refers to the last case here in which arachnoid cysts were discovered.

H. H. died in the West Riding Asylum on the 11th of June last, having completed the dreary curriculum of general paralysis, unvaried in his case by any exceptional incidents. The post-mortem examination of his body took place thirty-five hours after his death, and revealed the presence of arachnoid cysts on his brain. The instant that the skull was opened the presence of these cysts was suspected, for the dura mater was not so white as it ordinarily is, but had a diffused bluish tinge, and fluctuated perceptibly when touched. The reflection of the dura mater brought the cysts into view, lying upon both hemispheres, and covering what was exposed of them entirely, so that no convolution was visible. Between the dura mater and the cysts a certain degree of adhesion existed, which could, however, be readily broken down by the finger tip, except at a few scattered points over the left hemisphere, where threads of greater tenacity bound them together, requiring the point of a knife for their severance. The inner surface of the dura mater, wherever in contact with the cysts, had a rusty reddish brown colour, due to an exceedingly fine layer of deposit capable of

being scraped off. The cysts themselves were quite distinct from each other, and that on the left side was much the larger of the two. It formed a large membranous bag with fluid contents, and it not only covered the upper aspect of the hemisphere, but was wrapped round its edges and ends, and continued as a toughly glutinous layer over the orbital lobule to the middle sulcus, and over the whole contour of the temporo-sphenoidal lobe. In colour it varied from a dull buff over the parietal eminence to a pale pink at its outer margins, dabbled with sanguine blotches, and with irregularly interspersed greenish and brownish tints. In its walls, which were smooth and moist, ramified minute vessels, and in its interior were several ounces of clear fluid of a greenish red colour. This fluid occupied the cavity of the cyst, which was co-extensive with the parietal and posterior portions of the frontal lobe. Beyond these limits the two layers of the cyst became adherent, though for some distance they could be torn asunder. Ultimately, however, towards the base of the brain, they became intimately and inseparably connected, and formed one delicate membrane of the consistence of the most toughly organised clots found in the cardiac cavities. The cyst covering the right hemisphere in all respects resembled that on the left side, except that its walls were everywhere thinner, and that it contained a less amount of fluid. When the two cysts were removed from the hemispheres, from which they could be readily peeled off, being only adherent by a few reddish threads (blood vessels) binding them to the arachnoid and pia mater beneath, the brain was seen to be generally flattened and compressed. The convolutions looked as if they had been smoothed out, and the sulci were scarcely discernible. This was especially the case on the left side, where the compression of the brain was most marked, the frontal lobe having an attenuated and pointed appearance. Beneath the cysts, the visceral layer of the arachnoid, opaque and milky in some places, was distinctly seen, and beneath it was the pia mater, intimately adherent to the cineritious matter of the gyri. A few of the gyri on the left side—the ascending parietal, postero-parietal lobule, and angular gyrus—presented an unusual appearance, the outer surface of their cortical matter being stained of a deep reddish yellow or mahogany colour. This staining, unlike the adhesions of the pia mater, was not confined to the summits of the gyri, but dipped down along their sides, even to the bottom of the sulci. When removed from the brain and emptied of their fluid contents, the two cysts weighed exactly 39 grammes.

In this case the arachnoid cysts were of great size and extent, and belonged, indeed, to the most marked type of these

morbid formations which are seen in other cases of very varied dimensions, but all partaking of the same characters. Even in those cases where the reparative process has advanced furthest in the removal of the cysts, they are found as thin, transparent, cloudy membranes, investing the frontal or parietal lobes, separable towards the middle into two layers, perhaps closely applied, or even adherent to each other, but continued as one attenuated membrane towards the periphery.

Arachnoid cysts are, as I have said, perhaps the most striking, and they are certainly not the least frequent, of the intra-cranial pathological appearances found on inspection of the bodies of the insane. I have carefully gone over the reports of 1,240 post-mortem examinations performed under my own supervision in the West Riding Asylum during the last nine years, and I find that in exactly 59 of these cases were arachnoid cysts discovered. The induction is sufficiently large to warrant the conclusion that such cysts exist in nearly 5 per cent. of all lunatics dying in asylums. In the 59 cases I have of course included cysts in every stage of development, and all sub-arachnoidal hæmorrhages, except such as were connected with clots in the cerebral substance, and were really dependent upon the breaking out of the clot on the surface of the brain or on the escape of blood from the ventricles. Wherever extravasation of blood had taken place into the arachnoid cavity, whether that extravasation had become organised or not, I have considered the case one of arachnoid cyst, and have embraced it in my statistics. The cases, however, in which the extravasation was of recent origin, and remained as a film of fluid blood or a simple clot, were only 11 in number, leaving 48 cases in which a membranous formation and persistent sac had taken the place of the original coagulum. The 11 cases, too, in which the cysts were in their incipient stage all presented features making the true character of the sanguineous effusion into the arachnoid quite unmistakable.

Of the 59 patients in the West Riding Asylum in whom arachnoid cysts were shown to exist on post-mortem examination, 43 were males and 16 females, so that the liability of the male sex to this particular pathological change seems to be nearly three times as great as that of the female sex. The explanation of this singular disparity is to be sought in the much higher liability of males to suffer from those serious organic diseases of the cerebrum upon which as a rule arachnoid cysts supervene. The following table shows at a glance the diseases and degenerations which afflicted and caused the death of those 59 patients in whom arachnoid cysts were recorded :—

Disease	Male	Female	Total
General paralysis of the insane	26	3	29
Chronic disorganisation of the brain	11	5	16
Senile atrophy of the brain	3	1	4
Epilepsy, with dementia	1	2	3
Chorea, with mania	—	2	2
Meningitis, with mania	1	1	2
Bright's disease, with mania	1	1	2
Phthisis, with chronic mania	—	1	1
Total .	43	16	59

We thus see that in nearly one-half of the whole number of cases in which arachnoid cysts were found general paralysis was the disease causing death, and that in every case, there is reason to suppose, there was antecedent degeneration of the brain or its blood-vessels. The ages at the time of death of the patients in whom the morbid change under consideration existed correspond of course with those periods of life in which organic diseases of the brain and its membranes have their maximum frequency. As is shown in the accompanying table 28, or nearly one-half of the whole number of arachnoid cysts, were found in patients dying between the ages of 35 and 45. A distinction is thus pointed out between arachnoidal hæmorrhages and those taking place in the substance of the cerebrum, which have their maximum frequency at a much later period of life.

Age	Male	Female	Total
Between 20 and 30	1	1	2
„ 30 „ 35	2	—	2
„ 35 „ 40	17	3	20
„ 40 „ 45	6	2	8
„ 45 „ 50	3	3	6
„ 50 „ 55	6	4	10
„ 55 „ 60	4	2	6
„ 60 „ 70	2	1	3
„ 70 „ 80	2	—	2
Total .	43	16	59

As to the localisation of the cysts, I find that in 14 of the 59 cases the cyst covered the left hemisphere, in 13 the right hemisphere, while in 32 cases there were cysts over

both hemispheres. Although it might seem from these figures that the two hemispheres are liable to be affected by arachnoid cysts in about equal proportion, there is other evidence indicating that the left side of the encephalon is the more chosen habitat of that particular morbid change. In 8 of the 32 cases in which cysts were spread over both hemispheres it is noted that that on the left side was much the larger and fuller of the two, whereas in only 1 case of the 32 is there a record that the right cyst exceeded the left one in size. Then in the 14 cases in which the cyst was limited to the left side the descriptions given unmistakably show that the pathological condition was more pronounced than in the 13 cases in which the right side was affected. It was in those 14 cases that the most decided instances of wasting of the hemisphere compressed by the cyst occurred. Thus in J. M. the left hemisphere, which had been enveloped in a cyst, weighed 470 grammes, while the right, which had not been so enveloped, weighed 595 grammes. In G. L. the left hemisphere, which had been cyst-covered, weighed 528 grammes, and the right, which had been free, weighed 570. On the other hand, in the cases in which cysts were found on the right side alone the difference in the weight of the two halves of the cerebrum was comparatively trifling.

Respecting the mode of origin of those cysts found in the arachnoid cavities, I have already taken for granted the truth of the proposition that they result from extravasations of blood. The writings of Mr. Prescott Hewett, Dr. Ogle, Dr. Wilks, Dr. Henry Sutherland, and of other able observers, may be almost said to place that truth beyond cavil. The old theory that these cysts originated in the organisation of lymph poured out during an anachritis has now few supporters. The cysts have been seen in every stage of their formation—from fluid blood up to tenacious membrane, and light has been thrown on their nature and structure by experiment and the study of various allied conditions. Thus Sperling ('Centrall.' 1871, 448) has made injections between the dura mater and the arachnoid over the convexity of the brain in rabbits with the following results:—Eight days after the injection of fresh blood it began to be organised into a connective-tissue membrane, which was complete after two or three weeks. After the latter period new blood-vessels were found in the new membrane, which agreed in all characters with the membrane of pachymeningitis. The organisation of the blood occurred over the convexity of the brain on the inner surface of the dura mater without any adhesions to the arachnoid. The formation of the new membrane was due to the organisation of the fibrin

contained in the blood. That this was so was shown by the fact that no new formation was found after the injection of defibrinated blood, which was completely re-absorbed. Injections of iodine and other irritating fluids was not followed by any new formation. In some cases the dura mater was found thickened, in others there was pus. Then in the cephal-hæmatoma of infants we may discern an analogous origin and a series of analogous changes to those which take place in the intra-cranial hæmatomata of adults.

It is no uncommon occurrence to find in the infant whose head has been subjected to severe and long-continued pressure during parturition, by the os uteri or against the walls of the pelvis, large extravasations of blood both without and within the cranium. The pressure to which the infant's head has been subjected has bruised its tissues, and the difficulties connected with the establishment of a new current of circulation and a new respiratory process have interfered with the free return of the blood from the cephalic vessels, as the tumid and livid features seen at such a time abundantly testify, and so a capillary hæmorrhage or oozing takes place. If the extravasation be within the cranium and be of considerable amount, death, preceded by coldness of the surface, laboured breathing, slowing of the pulse, and muscular twitchings or convulsions, takes place. If it be within the cranium, but of less amount, a false membrane is formed, the cerebrum is compressed and restricted in growth, and incurable idiocy results. And if it be within the cranium, and of still less amount, it may be altogether absorbed and produce no unpleasant consequences. If, on the other hand, the extravasation be without the cranium, little or no danger attends it, and facilities are offered for watching its formation and the changes which it undergoes. Under such circumstances it first becomes perceptible within a few hours of birth, on one or both of the parietal bones, as an elastic fluctuating tumour, which goes on slowly enlarging for several days, until it sometimes attains the size of an orange. When it has reached its full dimensions the cephal-hæmatoma—for so the tumour is designated—remains stationary for some time, and then retrogrades in a definite manner. A ring of hard consistence forms at the circumference of its base, the clot separates into serum and crassamentum, the latter is gradually deprived of its colouring matter, a steady diminution in size goes on, until complete absorption has taken place. For long, however, after the cephalhæmatoma has disappeared, a slight elevation may be found at the site which it occupied.

In the othæmatomata of the insane a connecting link

may be found between the cephalhæmatomata of infants and the arachnoid cysts of chronic lunatics. These othæmatomata have been shown to depend on an accumulation of blood between the skin of the pinna and the cartilage, gradually increasing until a high state of tension of the covering is reached, and then retrograding by the formation of a coagulum, the adhesion of a membrane to the walls of the sac, and the steady absorption of its liquid contents, until only a few fibrous shreds and some cholesterine are left at its core. The different stages of growth and retrocession in the blood tumours of the ear agree closely with those which take place in the blood tumours beneath the dura mater, except that in the case of the ear tumours there are certain special subsequent changes attributable to degeneration and shrivelling of the cartilage, the nutrition of which had been seriously interfered with by the extravasation. In all blood tumours, in fact, the process of growth and decay is tolerably uniform. The sanguineous effusion is gathered into a clot or disseminated into a layer. It forms a coagulum, enclosing the fluid portions of the blood, that coagulum is absorbed or becomes condensed and organised, with vessels ramifying in it, and then it remains stationary or dwindles away, according to its surroundings.

The mode of origin of arachnoid cysts in the manner indicated is now almost universally admitted, and the point to be determined is not whether these cysts are hæmorrhagic in their source, but whence the hæmorrhage has taken place. By some it is maintained that it proceeds from the ruptured vessels of a false membrane or efflorescence lining the dura mater, and resulting from a pachymeningitis, and by others that it has its source in the vessels of the dura mater itself. But neither of these views seems to me to be satisfactory. The few and slender vessels which penetrate the dura mater from its outside, where its great vascular supply is situated, are incapable of pouring out so large a quantity of blood as frequently goes to the formation of a cyst; and this will be especially evident when it is borne in mind that these vessels—the *vasa propria* of the membrane—have a singular proclivity to become plugged by coagula, and so sometimes induce gangrenous changes in areas of parenchyma thus cut off from nourishment. Then, as to the alleged false membrane of the dura mater and its bleeding capillaries, it is to be remarked, that in many cases where the cysts are largest no such membrane nor any reminiscence of it, nor any extraordinary thickening of the dura mater has been discoverable; and that in other cases, where a gauzy shreddy lining of the dura mater, distinct from the cyst, has been discerned, its vessels also have seemed inadequate to the production of such

a hæmorrhage as that which goes to the making of an arachnoid cyst. The capacity of the newly developed capillary network in the way of extravasating blood may, perhaps, be gauged by the bloody points and blotches which are often seen in its substance, and which do not exceed a sixpence in circumference or thickness. The gap between these blotches and an arachnoid cyst is certainly very wide. Even allowing that the capillaries in such a membrane are very capacious, and are distributed in young and lax connective tissue, and that they are, as has been said, a diverticulum or safety-valve for the increased tension of the actively congested dura mater, it is still impossible to admit the conclusion sought to be drawn from these facts, that they may, by interstitial hæmorrhage, create those masses and extensive layers of clot that are transformed into arachnoid cysts. If arachnoid cysts were really derived from such efflorescences, we should expect to find them formed most frequently at the time when the circulation in the new membrane was most active, when the pachymeningitis was at its height. But the fact is, that we never do find such cysts in cases of general paralysis or other brain disease in its early stages, when inflammatory changes might be supposed to be most energetic. I have never encountered such a cyst or its preparatory clot in any general paralytic carried off by intercurrent disease earlier than the second stage of the malady. Arachnoid cysts are consequential and not essential changes in all the diseases in which they occur. As a rule, too, they do not begin to form until the disease has well-nigh run its course. And here we have a clue to their point of origin. If these cysts never appear until the disease is far advanced—until much wasting of the brain has taken place—it is fair to infer that they are drawn from some of the vessels which become over-distended when wasting is established. And the vessels which suffer most in this way are the great veins which run over the frontal and parietal lobes, conveying the blood to the longitudinal sinus. These become terribly dilated and engorged, and at the same time, being to a great extent surrounded by serous fluid, they have lost some of that support which they normally derive from the subjacent brain-substance. Then they are also in a state of permanent atony brought on by the protracted and often-repeated irritation and hyperæmia of the cineritious substances of the brain in general paralysis and kindred complaints; and this state, through passive congestion and phlebectasy, distension and elongation, may lead not merely to effusion of serum and œdema of the pia mater, but also, on the occurrence of any determining cause, to actual hæmorrhage. This will be particularly likely to happen when the delicate walls of the veins are

degenerated as well as stretched and dilated, as it is not improbable they are in many organic cerebral diseases. All this being so, it appears that the veins of the pia mater are, under certain circumstances, very liable to rupture; and the calibre of these veins is such that they could furnish forth the smallest and the largest of the superficial clots that are found on the surface of the brain. It is certainly an instructive fact in relation to their origin, that the largest of these superficial clots invariably have their centre and thickest part precisely at those sites where wasting is always most decided and where the veins are most distended, that is to say, in the upper frontal and parietal regions.

It is scarcely to be expected that in such hæmorrhages as those into the arachnoid cavity the precise point of leakage should be detectable. If the hæmorrhage is of any age at the date of the examination the damage may have been repaired; if it is quite recent there are generally revealed by its removal a large number of oozing points in the vessels, from any one of which it might have originated. In one case, however, which came under notice in the West Riding Asylum some years ago, conclusive evidence was obtained that an extravasation into the arachnoid cavity may come from the great veins. True in that case the pathological conditions displayed were somewhat unique; but the significant fact remains that the blood poured out had flowed, not indeed from the veins of the pia mater, but from their confluence in the sinuses of the dura mater. The patient was a woman 53 years of age, who had laboured for above four years under chronic mania, and who was steadily losing health. While passing through an exacerbation of excitement in December 1871 she suddenly, in the midst of a transport of shouting, became silent, pale, and faint. Taken to bed, she grew drowsy and stupid, and in twelve hours was in a state of deep coma, which continued for four days, and then ended in death. At the inspection of her body a large dark pulpy clot, about an eighth of an inch in thickness, was found lying upon the surface of the brain on the left side. It covered the tempero-spheroidal lobe, and extended backwards on to the occipital lobe, and upwards on to the parietal lobe. On removing the mass of the clot several small stringy clots of considerable tenacity were found proceeding from it into several small distinct holes or deficiencies in the left lateral sinus. Out of these holes the tenacious clots could be dragged, leaving patent communication with the cavity of the sinus. There were three such holes distinctly visible, and a few smaller and less distinct ones. The dura mater, where forming the left lateral sinus and in its vicinity was thin, and had a singular

reticulated appearance. It looked as if it were almost cribriform, as if it had been macerated and the bundles of fibres composing it had been dissected out and separated from each other. Along the superior longitudinal sinus there were several reticulated attenuated-looking patches resembling those seen over and about the lateral sinus.

Cases have been reported in which, from traumatic causes, the veins of the pia mater have been altogether torn away from the superior longitudinal sinus, and no difficulty need, I think, be experienced in conceiving how minor injuries of these veins, or their rupture from extreme distension, may permit the formation of large superficial clots and arachnoid cysts. Dr. Wilks, than whom no higher authority could be quoted upon such a subject, has expressed his belief that the effusions of blood which give rise to arachnoid cysts may proceed from a laceration of a vessel of the pia mater.

It has been generally alleged that the effusions of blood which give rise to arachnoid cysts result from blows or injuries, and no doubt much may be said in favour of that theory. These cysts are mostly found in patients who have suffered from diseases characterised by diminished precision of muscular movement and loss of the power of equilibrium, and characterised also by restlessness and reckless excitement, so that it might well be that in such cases falls and concussions of the brain have been sustained. My own observations, however, have led me to believe that in reality blows and injuries play a comparatively insignificant part in the causation of arachnoid cysts, and that other conditions are more generally responsible for their production. Allowing at once the impossibility of proving that blows have not been instrumental in their production, particularly when the recollections of the patient himself are not available as evidence, I may still instance cases which have fallen within my own knowledge, which had been carefully watched from first to last, in which no accident of any kind had been known to have taken place, and in which these cysts were discovered post mortem. I have found these cysts in their incipient stage existing, indeed, as a dark soft clot of blood, obviously formed only very shortly before death, in patients who had been bed-ridden and incapable of spontaneous movement for weeks prior to their decease, during which they had been watched uninterruptedly, and who presented no vestige of a bruise or injury upon the scalp or any other part of their bodies. One very instructive case bearing upon the point at issue occurred in my practice some years ago. A patient well advanced in general paralysis, but without any muscular symptoms except thickness of speech and tremor of the face, was seized by epileptiform

convulsions in my presence. He was seated at the time when the convulsions came on, and did not fall, but was at once supported and conveyed to bed, where he continued to suffer from general chronic spasms for twenty-four hours, his head, face, and neck being livid, congested, and bathed in perspiration throughout the seizure. After the convulsions ceased he remained in a drowsy, semi-comatose state for nearly a week, and then it was ascertained that he had, to a great extent, lost power in his right arm and leg. This condition of partial hemiplegia was subsequently in some degree mitigated, but it never entirely disappeared until his death, which happened two months after the first and only epileptiform attack from which he had suffered. At the *sectio cadaveris* a pulpy membranous clot, decolorised at its centre and containing there a cavity with fluid contents, was found stretched over the upper surface of the left hemisphere, upon which it exercised considerable pressure. I think it is reasonable to infer that that clot or arachnoid cyst was formed during the epileptiform seizure, and was due not to any external violence, but to the over-distended state of the intracranial vessels during the long-sustained convulsive condition.

Bearing in mind that towards the close of general paralysis, and other organic diseases of the brain accompanied by wasting, the vessels are dilated, are deprived of their proper support, and are also badly nourished and degenerated, it is not difficult to understand that many other circumstances besides the jar of a concussion may lead to their rupture and the effusion of their contents. No doubt a sudden and violent vibration may and does sometimes bring about that catastrophe, but what I desire to insist upon is that there are many other agencies which are at least equally potent in inducing it. Any circumstance or condition that occasions cerebral hyperæmia may be responsible for its occurrence. And such circumstances and conditions are certainly not wanting in patients of the class liable to arachnoid cysts. They labour under a great tendency to fecal accumulations in the intestines, and these, by compressing the abdominal aorta, are particularly apt to cause cerebral congestion. They are rash and careless in their conduct, and often expose the skin to cold, and so set up collateral fluxionary congestion of the encephalon. They are often sedentary in their habits and voracious in their appetites, and so grow fat and plethoric for a time after the cerebral disease has spent its earliest force, and are thus again exposed to risks of hyperæmia of the brain. They are subject to transient attacks of mental excitement, during which there is active hyperæmia of the cortical substances of the brain, and in which they shout

and strain, and so hinder the return of blood to the thorax, and aggravate the cerebral congestion. And they are subject also to epileptiform attacks, often of great severity, in which there are trachelismus, fixture of the respiratory muscles, and an intense degree of engorgement of all the blood-carrying conduits of the head. In one and all of these conditions there is surely enough to account for arachnoid cysts in many cases without resorting to the crude hypothesis of mechanical disturbance.

Were these cysts in many instances due to blows or falls we should certainly expect to find associated with them occasionally some of the other and more ordinary consequences of injury of the head of such severity as to cause the rupture of a vessel. Now, it is a remarkable fact that I have never in such cases seen a trace of hæmorrhage outside the dura mater, although, as is well known, the meningeal vessels are most of all apt to give way when violence is applied to the head. It is remarkable, also, that I have never been able to detect any damage to the skull, any rupture or softening of the cerebral substance, or any remains of those changes which are most familiar as the results of injuries of the head. On the other hand, again, it is curious that in cases in which undoubted injuries have occurred to the head arachnoid cysts are very rarely encountered, save in general paralytics and other patients with organically diseased brains. From all which it must, I think, be deduced that an error has been committed in attributing all arachnoid cysts to traumatic causes, and that we shall be justified in holding that many of them are ascribable to the spontaneous laceration of a vessel, owing to morbid changes and conditions. Such spontaneous laceration we see taking place in whooping-cough, and also in those very diseases upon which arachnoid cysts supervene in the othæmatomata (to which we have already adverted) of the external ear, which were also at one time held to be invariably the offspring of injury, but which are now known to grow up without the intervention of any outward force. It seems to me that the old formula that injuries of the head affect the surface of the brain and diseases its interior is no longer tenable, and that for practical and medico-legal purposes we are bound to depart from the notions which have long been promulgated about arachnoid cysts, and to maintain that they may and frequently do originate in what is called a spontaneous manner.

To the interesting enquiry that arises whether there are any distinctive symptoms making it clear during life that an arachnoid cyst has been formed, and making it safe to predict that one will be found after death, only an uncertain answer can be returned. *A priori*, one should have thought that such a for-

midable-looking lesion in so infinitely important a position would have been attended by unmistakable outward signs, and indeed, when looking at a large cyst one cannot help wondering that life was for any length of time compatible with its presence within the cranium. The fact is that such an extravasation occurring in a previously healthy man would inevitably cause speedy death, and that it is only tolerated in those diseased persons in whom it is found because they have been prepared, as it were, to receive it and to sustain its effects. The grey matter of the cerebrum is exceedingly liable to alteration under various conditions, and in certain states of alteration is able to adapt itself to circumstances that in its normal state would prove fatal. In the undeveloped brain large clots are borne with impunity, and MM. Rilliet and Barthélemy have pointed out that in infants copious and widely diffused extravasation of blood may exist on the surface of the hemispheres without any paralysis being present. Well, in the involuted brains of chronic lunatics a similar insensibility exists. The degenerated, or partially disintegrated, cerebral matter is far less susceptible to the influence of compression and irritation than it was in those days when it rejoiced in the plenitude of its power. An amount of compression that would at once arrest the functions of a vigorous brain and interrupt consciousness may exert but little effect on the sluggish movements of one that is already dilapidated and may scarcely augment the helplessness of dementia. The degenerated brain is already, owing to changes in its vessels and the surrounding textures, in a state of anæmia, and cannot therefore have its blood squeezed out of it by compression to the same extent as takes place in a healthy brain in the fulness of its vascular supply when similarly treated. Therefore it comes about that in general paralysis and organic dementia the indications afforded of a superficial hæmorrhage on the brain are sometimes very insignificant, especially if the hæmorrhage has taken place slowly. These indications consist in some slightly increased impairment of muscular power on one or both sides of the body, and in some further deepening of the already profound fatuity, and cannot of course warrant more than a suspicion that a superficial hæmorrhage has taken place. In some cases, however, there are other symptoms which may convert a suspicion into tolerable certainty, and which may even enable us to fix upon the precise time when the hæmorrhage occurred and the foundations of the cyst were laid. In a case already quoted, it was tolerably clear that the hæmorrhage took place during an epileptiform seizure, and in several other cases, of which I possess notes, the symptoms suggest forcibly that the clot was formed under similar circum-

stances. One case may be mentioned which proves incontestably that extravasations of blood do occur on the surface of the brain during the convulsive seizures of organic cerebral disease. M. L., female, aged 38, was sinking quietly through the final stage of general paralysis of four years' duration, when, on April 25th, 1873, she was seized by convulsions, which recurred frequently on that and the following day. The convulsive movements were sometimes on one side of the body, sometimes on the other, and occasionally bi-lateral. They affected, however, chiefly the left side of the body, the head being turned as if looking over the left shoulder. On the second day it was noted that, during the intervals between the convulsions, she lay with her head slightly turned to the left and that she was incessantly going through a chewing movement; she endeavoured to bite everything that was brought near her, and when nothing else was available she gnawed her own hair and the bedclothes; she was only partially conscious. She continued in much the same state up till the 6th of May, when she died. At the post-mortem examination, six small distinct dark clots were found under the arachnoid, in the meshes of the pia mater, lying upon the three tiers of frontal gyri of the right side. These were quite recent and quite superficial. All the vessels of the pia mater were engorged with dark blood. In another case the formation of the clot at a much longer period before death was indicated with tolerable clearness. S. A. S., a female, aged 46, who was suffering from severe chorea-mania, went to bed in her usual condition at 7.30 P.M. on the evening of October 24th, 1873. An hour later she was found by the night-nurse apparently dead: her features were pallid, and there were no respiratory movements beyond a few convulsive twitchings in the throat. Artificial respiration had to be kept up for some time before she revived. For many hours she remained in a stupid bewildered semi-comatose condition, and when this passed off she was still decidedly more fatuous and feeble than she had previously been, drooping perceptibly to the left side. She grew worse and died from typhlitis in the February following, when a thin reddish yellow membrane of considerable tenacity was found spread over the right hemisphere, having its centre in the parietal lobe.

The commencement of the clot in an attack of excitement was illustrated in the case of T. E., aged 36, an inmate of the West Riding Asylum. This man, who was a general paralytic, had improved slightly under Calabar bean, when, on October 11th, 1875, he had an unaccountable outburst of excitement, in which he shouted, stamped, swore, and behaved with great violence. His fury, however, gradually became more

impotent, and he passed into stupor. On the following day his eyeballs were prominent, his pupils were unequal and irregular in their margins, his face was flushed, his gait was very unsteady, and he was torpid and could not speak. Subsequently he failed rapidly, and died on April 22, 1875. Over the left hemisphere of his brain was found a thin membrane, separable into two layers and pretty firmly adherent to the dura mater.

As to the treatment of arachnoid cysts not much can be said, as they scarcely admit of treatment apart from the diseases of which they are complications. The great matter is to guard against their formation. If we knew that blood was actually being poured out into the arachnoid, we might, perhaps, limit the amount of the extravasation by ergotine and active purgatives. When, however, the extravasation has once taken place not much can be done beyond improving the general health, so as to favour absorption. Iodide of potassium has been tried, but with doubtful benefit.

ART. III.—CONDITION OF LUNACY IN ENGLAND.

THE Twenty-ninth Annual Report of the Commissioners in Lunacy has just been issued, containing valuable particulars and statistics, relating to the care and treatment at present existing in England of persons of unsound mind.

By perusal of its pages, we find that on the 1st January of the present year there were on the official books of the Commissioners 63,793 registered lunatics, showing an increase of 1,766 on that of the preceding year. Of this number 7,390 are registered as private lunatics, and 56,403 as pauper lunatics. Among the former class are included patients, not only residing in licensed houses, but also those maintained at the national cost at the Royal India Asylum, at the Yarmouth Naval Hospital, at Netley Abbey, Grove Hall, Bow, and at the Criminal Asylum, Broadmoor. Among the pauper lunatics are placed only those who are maintained wholly or in part by or chargeable to parishes, unions, counties, or boroughs.

The increase during the year of private patients is 98, and of paupers 1,668. The increase of the latter has taken place in the county and borough asylums by 1,157, in licensed houses by 168, in Broadmoor Criminal Asylum by 20, in workhouses by 358. But there is a decrease in the out-door paupers by 17, and also of 52 maintained in registered hospitals. The increase of private patients is 1 in county and borough hospitals, 81 in registered houses, 50 in licensed houses, 5 as "single patients" under private care, but it has decreased in number by 7 in the Naval, Military and Indian asylums, and by 32 in the Criminal Asylum of Broadmoor. The total population between the years 1859 and 1875 has increased 21·63 per cent., but the private patients *under care* have increased as compared with 1859, 48·39 per cent., and the increase of the paupers in the same time *under care* is 77·47 per cent. At the present time there are 172 males and 269 females under care as single patients in private unlicensed houses.

Twelve interesting tables are given relating to the distribution of the insane during the last fifteen years, both pauper and private; and it is a matter of congratulation to find by reference to Tables V., VI., and VII., that the recoveries have been 4 per cent. higher than they were last year, and 2 per cent. above the average of the last sixteen years, whilst the rate of mortality has remained stationary. We regret to

find out of 32,529 inmates of County and Borough Asylums only 2,431, or a proportion of 7·47 per cent., are deemed curable, but this to a great extent appears to us to be due to the fact that these asylums are gradually becoming occupied by a large proportion of chronic and incurable patients, who might well be sustained in well-organised workhouse wards. The attention of the Commissioners has for some years been directed to the large number of epileptic patients who are found dead in bed, and to the frequent occurrence of suicide during the night, especially in public asylums. Attention was directed to this subject in the 26th and 28th Reports of the Commissioners in Lunacy, but notwithstanding the opinions therein expressed of the inefficiency of the night nursing in public asylums, proper precautions have not been hitherto taken.

The Commissioners think that special attendants should be appointed for the exclusive care of these cases during the night, and that arrangements should be made either by alterations in existing wards, or by the construction of others affording ready facility for immediate supervision.

Epileptic cases are generally under the strictest supervision during the day, but during the night are apt to be neglected. The Commissioners write as follows: "It is not only on account of the number of epileptics found dead in their beds, and of suicides which take place during the night—casualties which, under proper arrangements, might often have been prevented—that we continue to press our views, for we are strongly of opinion that the sick and dying also demand continuous nursing during the night. At the same time the epileptics should have assistance always at hand during their terrible seizures; and all suicidal patients should receive that strict personal supervision which alone can secure their safety. In large asylums nothing less than the provision of special wards for these classes will meet the requirements of the case. Whether in small asylums suitable arrangements can be made for the suicidal cases in combination with the sick depends upon the construction of the buildings and the disposition of the superintendents, most of whom, we believe, are favourable to our views."

We are glad to find that these recommendations have been carried out with excellent results in several asylums. The various suicides and casualties which have taken place during the year in the County Hospitals and Licensed Houses are given *in extenso* in the Report, and also the various alterations in the structural and other arrangements of these institutions. The condition of establishments, both public and private, for

the reception of the insane, appears to us to be highly satisfactory on the whole, with the exception of the accommodation provided for the reception of the insane in workhouses; and we beg here to express our disappointment and regret at the reluctance displayed by Boards of Guardians and medical officers connected with these institutions in carrying out the recommendations of the Visiting Commissioners; and our remarks would here especially allude to the Union Workhouse of Langport, the Brownlow Hill Workhouse, in the parish of Liverpool, and the Nottingham Union Workhouse. We would also suggest that the relieving officers and others who are connected with the care of pauper lunatics should make themselves cognisant with what is required of them in the Act relating to the legal bearing of the several sections of the Lunacy Act. The Report before us contains actions which have been brought against officials for breaches of the Lunacy Acts, and we consider that at the present day it is a public disgrace that the cases here reported should have taken place. It is sufficient for our purpose to report briefly the facts relative to one of the cases here cited.

At the commencement of 1873, George Wilson, a retired servant in the Post Office, residing in the parish of Saint Mary, Islington, showed symptoms of mental aberration. Mr. Merrifield, the relieving officer of the parish, was informed that there was a lunatic in his parish not under proper control. Merrifield visited the house of the alleged lunatic three times, but he never saw Wilson, or attempted any steps for his proper supervision, notwithstanding he was informed that he was a dangerous lunatic. In fact, he neglected his duty in failing to comply with the 16 & 17 Vict. c. 97, s. 68, in giving notice of the fact to a Justice, in order that the prescribed steps for the proper detention in an asylum might be taken.

The lunatic, thus at large, attacked one of his sons with a hatchet and killed him, but was, when arraigned on trial for murder, unable to plead, and acquitted on the ground of insanity. The Relieving Officer was prosecuted by the Commissioners for failing to comply with the Act; he was convicted and fined the full penalty of £10.

The case to us amounts to positive manslaughter, and we trust Merrifield no longer retains the post of Relieving Officer, one for which he has proved himself to be unfitted.

Another case in which the Commissioners justly decided to prosecute we give particulars of:

Mrs. Goulden, landlady of a public-house, maintained in her house amongst others Sarah Pownall, the daughter of her first husband. It appears that this person had for some time been

considered eccentric, but at the same time had been accustomed to perform the menial offices of household work. In April 1873, some of the neighbours failed to observe her going about as usual, and on enquiry it was found that she could not be induced to leave a small room in Mrs. Goulden's house, which was appropriated to her exclusive use. The Commissioners report that "no active steps were taken to discover her real condition till the 24th of May last, when the room in which she lived was visited by the police. She was then found lying on a bed much too small for her, and made up of a carpet, an old sheet, and an old and dirty mattress. She lay with her knees nearly touching her chin, her legs were covered with excrement caked on to the skin; her hands and face were very dirty, her hair matted, whilst beneath the bed the floor was swimming with urine; the stench in the room being unbearable." Such then is the description given of a person, *non compos mentis*, whose friends have undertaken the care. By direction of the police the woman Pownall was washed and removed to another room, and on the following day, having been examined by a medical man, was forthwith conveyed to a County Asylum. Her mental state was that of great depression, but her bodily condition, on admission, was frightful. "She was filthily dirty, very thin, and weak, her legs were contracted, so that they could not be straightened beyond an angle of thirty degrees to the thigh, there were sloughing sores over the thighs and knees and under the arms." Such being the facts, the Commissioners most properly determined to proceed against Mrs. Goulden, under the 16 and 17 Vict. chapter 96, sec. 9, for the wilful neglect of Sarah Pownall. Summonses were issued, and the hearing fixed for the 6th of July.

The patient, however, died on the 25th of June in the Asylum, from exhaustion, and at the inquest, held upon the 6th of July, the Coroner's jury returned a verdict that the death had been accelerated by the culpable neglect of Mrs. Goulden, who was accordingly committed for manslaughter. The enquiry before the magistrates was held on the 13th of July, and Mrs. Goulden was acquitted of manslaughter, and convicted only of misdemeanour under the above-mentioned provisions of the Lunacy Act. On the 11th of August, Mrs. Goulden was found guilty at the Assizes at Chester of manslaughter, but in consequence of her age and infirmity was recommended to mercy, and sentenced to six months' imprisonment with hard labour. This of itself should convince those who at the present day are wont to ignore the responsibility incurred by those who undertake the charge of persons of unsound mind, that the charge is a grave one, and if abused, will be met with

its just reward. And it is perfectly monstrous, notwithstanding the popular cry, to suppose that persons of unsound mind in private houses, whether pauper or private, can receive the care, surveillance, and treatment provided for them in Asylums and Licensed Houses.

An important addition to the particulars required by 8 & 9 Vict. c. 100, to be inserted in the case-book kept at licensed houses, has been recently made by the Commissioners. Upon the admission of a patient the presence or absence of bruises must be mentioned by the medical superintendent in the case-book. This we consider most advisable. We have recently had a case under our especial notice in which, notwithstanding symptoms of dangerous and acute mania had for some time been evinced, the friends and relatives refused to take any active steps for placing the patient under legal restraint until they were compelled to do so in consequence of very alarming symptoms. The patient was in such a violent state that it was impossible for her to travel by rail, and she had to be placed in a carriage and driven to the asylum. Upon her admission, on an examination it was found she was covered with bruises on her arms and legs, the result of being forcibly held down in her violent struggles; entries of these bruises were made in accordance with the instructions of the Commissioners in Lunacy to which we have referred. In some cases the relatives might unjustly attribute bruises to the attendants at the asylum, but this cannot be done now, as will be seen by the excellency of this proviso.

The following are the Revised Orders respecting the Case Book:

CASE BOOK ORDER. REVISED, 1874. '

8 and 9 Vict. c. 100, s. 60.

The Commissioners in Lunacy, by virtue of the power vested in them by the Act of Parliament passed in the Session holden in the 8th and 9th years of the reign of Her present Majesty, intituled "An Act for the Regulation of the Care and Treatment of Lunatics," do hereby order and Direct—

That the Medical "Case Book," by the said Act directed to be kept in every Licensed House and Hospital, shall be kept in the form hereinafter mentioned, viz.:

First. A statement to be entered of the name, age, sex, and previous occupation of the patient, and whether married, single, or widowed.

Secondly. An accurate description to be given of the external appearance of the patient upon admission: of the habit of body, and temperament; appearance of eyes, expression of countenance, and any peculiarity in form of head; physical state of the vascular

and respiratory organs, and of the abdominal viscera, and their respective functions; state of the pulse, tongue, skin, &c.; and the presence or absence, on admission, of bruises or other injuries to be noted.

Thirdly. A description to be given of the phenomena of mental disorder: the manner and period of the attack, with a minute account of the symptoms, and the changes produced in the patient's temper or disposition; specifying whether the malady displays itself by any, and what, illusions or irrational conduct, or morbid or dangerous habits or propensities; whether it has occasioned any failure of memory or understanding, or is connected with epilepsy, or ordinary paralysis, or symptoms of general paralysis, such as tremulous movements of the tongue, defect of articulation, or weakness or unsteadiness of gait.

Fourthly. Every particular to be entered which can be obtained respecting the previous history of the patient: what are believed to have been the predisposing and exciting causes of the attack; what the previous habits, active or sedentary, temperate or otherwise; whether the patient has experienced any former attacks, and if so, at what periods; whether any relatives have been subject to insanity; and whether the present attack has been preceded by any premonitory symptoms, such as restlessness, unusual elevation or depression of spirits, or any remarkable deviation from ordinary habits and conduct; and whether the patient has undergone any, and what previous treatment, or has been subjected to personal restraint.

Fifthly. During the first month after admission, entries to be made at least once in every week, and oftener where the nature of the case requires it. Afterwards, in recent or curable cases, entries to be made at least once in every month; and in chronic cases, subject to little variation, once in every three months.

In all cases an accurate record to be kept of the medicines administered, and other remedies employed, with the results, and also of all injuries and accidents.

That the several particulars, hereinbefore required to be recorded, be set forth in a manner so clear and distinct as to admit of being easily referred to, and extracted, whenever the Commissioners shall so require:

And that the present order be in substitution for those of the 9th January 1846, and of the 20th March 1863, and that a copy hereof be inserted at the commencement of the Case Book.

Dated this 16th day of March 1874.

Office of Commissioners in Lunacy:
19 Whitehall Place.

It is generally the custom now for the Commissioners in Lunacy to send to each patient discharged as "Recovered" the following statement:

Office of Commissioners in Lunacy :
19 Whitehall Place, S.W.

187 .

I am to inform you that Notice has been received at this Office, that on the day of you were discharged
*, from care and treatment as a person of unsound mind.

The Commissioners desire that you should understand that you are now a perfectly free agent, and that no interference with your liberty of action will be justifiable under colour of the Lunacy Laws, except under fresh order and certificates.

As a proof that you have received this note, I am to ask you to tear off the acknowledgment on the fourth page, to sign it, and post it to this office.

I am

Your obedient servant,

Secretary.

We cannot altogether endorse this resolution of the Board. There are many patients who, when placed in an asylum—fortunately for their well-being—are under the impression that they come there voluntarily, their friends wishing them to think so in order to avoid exciting them unnecessarily. It appears to us, that when patients have been discharged recovered, it is unwise in most instances to make them aware of all the particulars of their detention, for by so doing it may be the means of causing much mental distress, and perhaps inducing a relapse. We will take, for sake of illustration, the following case:—A gentleman, whose bodily health is in a bad state, suffers from well-marked symptoms of melancholia, with delusions. He is desirous of placing himself under active supervision in an asylum; certificates and order for admission are duly filled up and signed, and he is received into the asylum as a patient in a fit state to associate with the family of the physician, at the same time imagining he has come voluntarily. Having resided for three months at the asylum, and receiving active treatment both for body and mind, he leaves the asylum “recovered.” Within a few days of his discharge he finds that he was legally certificated as a lunatic; much domestic grief and unhappiness are the result, and a relapse in all probability ensues.

The Commissioners briefly and feelingly allude to the death of Mr. Bryan Waller Proctor, one of the honorary members of the Commission.

The Report carefully describes the condition of the various County Asylums and Hospitals for the poor, and it is highly

* *Recovered*, or as the case may be.

gratifying to find that the reports are generally of a favourable description, and everything appears to be done for the comfort and care of the patients.

The criminal asylum at Broadmoor contains about 429 men and 116 women. The Commissioners say, "We learnt with satisfaction that no person certified to be insane whilst undergoing sentence of penal servitude has been sent to this asylum from Millbank since November. If no more patients of the convict class are sent here, those now in the asylum convicted in England, and sentenced to penal servitude for various terms, will within ten years have served their time, and can then be transferred to other asylums; but 19 convicted abroad, 12 convicted in Scotland, and 21 sentenced in this country to penal servitude for life, will ten years hence still be here, if alive and insane."

Another asylum is contemplated for the lunatic convicts now accumulating in prison, and for other convicts who may become insane. The asylum appears to be in a satisfactory condition.

The Report is most instructive, especially to those connected with the treatment and care of the insane, and our thanks are due to the Commissioners for their endeavours to further the kind and skilful management of the insane. Insanity is not what it was some years ago; we have now a recognised Board to inspect asylums, and everything is done to cure the patients by skilful treatment combined with kindness.

ART. IV.—ON THE PATHOLOGY AND TREATMENT OF CEREBRAL DISEASE.

BY ROBERT HUNTER SEMPLE, M.D.,

Fellow of the Royal College of Physicians of London.

IN a paper on Cerebral Disease written many years ago, and read before the Westminster Medical Society, I remarked that the only true basis of the classification of the diseases of the nervous system was to be sought in Pathology, and that in all fatal cases a diligent post-mortem examination should be instituted. In making this remark, however, I admit that in the present state of our knowledge the seat of disease in the nervous centres cannot always be precisely determined by the scalpel of the anatomist, even when aided by the magnifying powers of the microscope. Nevertheless, the attempt should always be made, and it is almost a truism to affirm that no person can be qualified to give a positive opinion upon a fatal case of cerebral disease unless such an investigation has taken place.

In accordance with these views, I have, in all cases where I found it practicable, made post-mortem examinations of the patients I have attended during life, as well as of many others where, to satisfy my own mind, I have examined the bodies of those who had died suddenly before medical aid could be obtained. From a diligent series of enquiries of this description, I have collected a large amount of materials, some of which are of a negative character, and others are in contradiction to nosological systems and theories; but others, again, have thrown so much light upon cerebral disease, and have often cleared up so much obscurity, that I feel grateful that such opportunities for enquiry have been presented to me, and I earnestly advise others to pursue a similar course, and to record the phenomena they observe.

To one who has been taught by the practical lessons of the dead-house, the artificial distinctions laid down and insisted upon by nosographers are comparatively unimportant; and although it is of course necessary to retain such terms as apoplexy, epilepsy, &c., yet these and similar words merely help to define certain groups of symptoms, which often depend upon causes wholly distinct from one another, and sometimes opposite in their nature. Thus, *convulsions* may arise from dentition, from inflammation of the cerebral membranes, from

the pressure of exostoses or of specula of bone, from the presence of undigested or indigestible matter in the alimentary canal, from worms, from uterine irritation, from toxæmia, from excess of blood in the system or from a deficiency of the same fluid, or from the action of certain poisons. The abolition of sense or motion, or of both—or, in other words, the condition usually called *apoplexy*—may be caused by narcotic agents, by the inhalation of deleterious gases, by mechanical pressure, by drunkenness, by congestion of the cerebral vessels, by hysteria, by effusion of blood or of serum within the cranium, by softening of the brain, by intracranial tumours, or by hydatids.

In many cases it must be fairly and honestly admitted that a correct diagnosis during life is simply *impossible*, and in such cases a post-mortem examination is the only mode of solving the difficulty. As I intend, as far as possible, to illustrate the remarks made in this paper by a reference to facts observed by myself, I adduce the following example of the observation just made. A year or two ago a young woman, of slender make, without any hereditary disease, was a patient under my care at the Bloomsbury Dispensary; she complained of violent pain in the head, but otherwise did not seem seriously ill, and was manifestly hysterical. The senses and the intellect were not impaired. She died rather unexpectedly, and it was totally impossible to assign any cause for the fatal event. But on making a post-mortem examination, a large abscess, of about the size of a hen's egg, was found on the right side of the brain, and connected with, and indeed caused by, a carious condition of the petrous portion of the temporal bone on that side. I made a diligent examination of the course of the disease, but could not find any communication towards the exterior of the body, and no discharge from the ear had ever occurred during life. It was certainly most extraordinary that so serious and extensive a disease should have caused during life such comparatively slight symptoms, but the case is far from being an uncommon one in the records of cerebral pathology.

The case now to be recorded is even more curious; and although it occurred many years ago, I have never seen a similar instance. There was, indeed, evidence at the last of some brain-disease, but what that disease was must have remained a mystery but for the revelation made by the post-mortem examination. The patient was forty-six years old, and was an inmate of an infirmary which I at the time attended. She had a bloated, leuco-phlegmatic appearance, and was of rather torpid intellect, but she had not suffered from any

remarkable ailment until the period of the fatal attack. She was sensible at first, but complained only of cough, difficulty of breathing, and general uneasiness. She was, however, anasarcaous, and the face was swollen and the lips were livid, and she gradually sank into a state of coma, her breathing being stertorous, her pulse very feeble, and her extremities cold; and in this state she died. The post-mortem examination showed that the kidneys were healthy, although the anasarcaous condition of the body might have led to the suspicion of renal disease, and the abdominal viscera, heart, and lungs were likewise healthy, with the exception of some evidence of chronic bronchitis, which had been detected and prescribed for during life. The brain, however, to my surprise, presented the following remarkable appearances. As I was examining the surface beneath the arachnoid membrane, I observed some semi-transparent masses in one or two places, and at first imagined them to be local effusions of serum; but on investigating them more closely, I found that they could readily be detached from the surrounding tissues, and were in fact hydatids, each consisting of a flask-shaped mass, having a thick skin and a gelatinous interior. I now instituted a diligent search for these hydatids in all parts of the brain, and found many of them on the exterior lying between the sulci, and overlapped and hidden by the convolutions—all being beneath the arachnoid membrane. One of them was found lying, free and unattached, in the left ventricle; it was much softer than the others, and resembled a small oval mass of jelly of a yellow colour. Another, much smaller, and rather hard, was found lying upon the optic nerve, on the right side, at the part where the nerve winds round the *crus cerebri*. Altogether I collected about eighteen of these hydatids, varying in size from that of a bean to that of a small pea, and there were also a number of others scattered about in various parts of the brain, but they were so small that I could not extract them entire. They did not exist so abundantly in the white as in the cineritious substance, and they were wholly wanting in the cerebellum. None were found in any other part of the body. The hydatids were taken by me to Professor Sharpey, who recognised them as examples of the *cysticercus cellulosæ*, and they are now in the Museum of University College, London.

I have never seen another case of this kind, either before or since, and I believe the occurrence to be very rare. I, however, at the time investigated the literature of the subject, and saw a coloured plate in the University College Museum, and executed by the late Sir Robert Carswell, representing a number of subarachnoid cysts, similar to those I have described.

Dr. Copland, in his Dictionary, mentions the fact of hydatids being found on the surface of the brain, but gives no case from his own experience; Dr. Abercrombie, in his work on *Diseases of the Brain and Spinal Cord*, also mentions the fact, but gives no case of his own. Mr. Solly, in his work on the Brain, alludes to the existence of hydatids in that organ, but gives no case from his own practice; and the French pathologist Cruveilhier states that he has met with hydatids beneath the arachnoid membrane, but gives only one illustration, which appears in the plate more like a large cyst than a true example of a cysticercus.

In determining the causes of sudden death, post-mortem examination is absolutely essential in arriving at any conclusion; and although I fully admit that many such cases are attributable to disease of the heart, yet cerebral disturbance accounts for a far greater number than is usually supposed. I agree with Trousseau, however, in the statement he makes, that *hæmorrhagic* apoplexy does not occur suddenly, but gradually; and lest I should be accused of presumption in placing my own experience in juxtaposition with that of so distinguished an observer, even for the purpose of confirming it, I may state that for many years of my life I had peculiar opportunities of watching the mode of death in apoplexy, for I attended a large infirmary, in which there was a great number of old people, and I was often present when the apoplectic attacks took place, or attended very soon after they occurred. I had, therefore, good means of observing the progress and termination of the disease, and as I have before remarked, I made post-mortem examinations in every case where it was possible to do so—that is to say, whenever the violent opposition of the relatives did not forbid such an enquiry. I may also state that I had opportunities, which the medical officers of large hospitals seldom enjoy, of watching the cases which recovered for many years afterwards, and also of knowing for many years beforehand the history and habits of those who were attacked.

Although, therefore, many of these cases of cerebral disease died suddenly, they were not instances of hæmorrhagic apoplexy, but of the congestive form of the malady; and in those who died of the former variety, although I frequently witnessed the first attack, yet there was an appreciable interval of some hours, or of some days, between the onset and the fatal termination. As the cases of sudden death from apoplexy of any kind are certainly somewhat rare, though not so rare as is generally supposed, I subjoin the following as an instance:—A girl, aged 17, an inmate of the infirmary alluded to, had been under medical

treatment for some time, on account of suppression of the menses; she was stout, healthy-looking, and of a florid complexion. The menstrual discharge was not restored, but one night, after eating her supper, she complained when in bed of some pain and uneasiness, but not of so severe a character as to induce her to ask for medical assistance. The next morning she was found dead in her bed, with her face downwards. A coroner's inquest was held on the body, and, as there were no circumstances of suspicion attaching to the case, a verdict of "Natural Death" was returned. After the inquest I made a post-mortem examination, and found the vessels of the scalp turgid with blood; and on removing the skull, the brain was seen to be in a high state of congestion, the veins and sinuses being greatly distended with fluid blood. Beyond this general congestion, however, the brain presented no morbid appearance, and no extravasation could be detected in any part. The heart and lungs were quite healthy, and so were the stomach, intestines, and liver. The bladder was empty, and the uterus was small, of healthy structure, and with its cavity empty. In this case there can be little doubt that death was due to cerebral congestion, and in all probability this congestion was connected with the suppression of the menses, and might have been relieved or averted if that natural evacuation of blood had taken place.

The following is another case of sudden death from cerebral congestion, or congestive apoplexy, although in a very different subject:—A gentleman, about 55 years of age, of a stout and plethoric configuration, of perfectly strict habits, and in easy circumstances, but fond, for amusement, of making abstruse mathematical calculations, had always enjoyed perfectly good health up to the time of the fatal seizure. He lived next-door to me, and I was well acquainted with him, but for the reason just mentioned I had never been requested to attend him professionally. One morning, about 10 o'clock, I was requested to see him immediately, as he had fallen down in a fit. I lost not a moment in going to him, but before I arrived he was dead. There were no circumstances of suspicion attaching to any person, and a coroner's inquest returned a verdict of "Natural Death." I made a post-mortem examination, and found great congestion of the scalp, and, on removing the skull, the veins and sinuses on the surface of the brain were all turgid with blood, which flowed freely when they were cut, but on the most careful examination no extravasation could be detected in any part of the brain. All the other parts of the body were minutely investigated, but, beyond congestion of some of the organs, and a large quantity of fluid blood in the

right side of the heart, no morbid appearances could be anywhere detected. This case was, I think, undoubtedly one of congestive apoplexy, or apoplectiform cerebral congestion.

Among the anomalous diseases which sometimes simulate apoplexy, softening of the brain is one of the most prominent and remarkable. Many attempts have been made to establish the diagnosis of this mysterious malady during life, but none have hitherto been entirely successful. The distinguishing features of it after death are plain enough, and its pathology, or rather its pathogeny, in many instances is quite intelligible; but it is still a desideratum in practical medicine to determine the symptoms which clearly denote its presence. I myself have long been convinced of the inutility and, indeed, the presumption of attempting to form any dogmatic views on the subject; and Trousseau was evidently of the same opinion, for in one of his lectures he declares, in answer to enquiries from his pupils, that the diagnosis between cerebral hæmorrhage and softening of the brain is "one of the most difficult problems in pathology." He, however, agrees with Récamier in thinking that the *sudden* occurrence of hemiplegia (he insists on the suddenness of the attack), without loss of consciousness, is characteristic of softening of the brain; and Dr. Todd, in his "Clinical Lectures on Nervous Diseases," entertains a similar opinion. Notwithstanding these high authorities, however, I maintain that the diagnosis is still exceedingly obscure, as the following case of undoubted softening of the brain will amply demonstrate.

A man, aged 62, of middle size, stout, and with short neck, said to have been of intemperate habits, was attended by me some years ago. He had a bewildered air, though he was quite able to answer questions put to him, but his appearance was dull and heavy. The head was rather hot, and he complained of great pain; the pupils were fixed between contraction and dilatation. Pulse 100, full and strong; tongue clear; bowels rather confined. There was no paralysis, convulsion, or spasm of any part of the body. My impression was that the man was on the point of having an apoplectic attack, and I strongly advised his wife to place him under careful medical supervision; and in the meantime I directed him to be bled, which was done. Although I now admit, after reviewing the whole history of the case, that this step did no real good, it certainly did no harm, for the patient experienced great relief from the pain in his head, and, in fact, left the infirmary and went home. He was, however, soon brought back again, as he had not materially improved. He did not present any peculiar appearance, but his intellect seemed rather dull; he, however, answered questions

quite rationally. He was not paralysed, and had no rigidity or convulsions in any part. My notes, made at the time, state that "*I was satisfied of this from my own observation; and although I frequently sought for and expected some of these symptoms, none made their appearance.*" The head was cool and moist; tongue clean; pulse 80, weak, and occasionally intermittent. The urine was albuminous. The hair of the head was cut close, and a blister was applied to the nape of the neck.

The other symptoms were very anomalous, and he was restless and irritable, tearing off the blister, which, however, had risen previously. Rather more than a week after his re-admission under medical treatment, this patient was seized with violent epistaxis from the left nostril, which was therefore plugged, and he died soon afterwards somewhat unexpectedly. The post-mortem examination revealed an extraordinary amount of softening of the brain, together with extensive disease of the cerebral arteries, to which the softening was of course due. The internal surface of these vessels was lined with an atheromatous and calcareous deposit, giving them the feeling and consistence of hard rigid tubes. The surface of the brain was almost universally healthy in appearance, and the colour pale; but on removing the upper portion of the cerebral mass on a level with the corpus callosum, and then examining the ventricles, I found that the fornix, the optic thalami, the corpora striata, and the substance adjoining, were all in a softened state and of about the consistence of clotted cream; but the colour of these structures was not changed. Some portions of the softened mass were examined by the microscope, and found to present a number of fat and pus-globules, oil-cells, and disintegrated nerve-cells and fibres. As to the other organs of the body, there was found hypertrophy of the left ventricle of the heart, but without valvular disease, and the kidneys were contracted and cirrhotic. This is, perhaps, as striking an instance of softening of the brain as can be adduced, and its cause, the rigidity and calcification of the arterial coats, is clearly manifested.

In reference to treatment, my present remarks apply only to the subject of apoplectiform seizures.

The treatment of the diseases usually called apoplexy—which, according to the views already expressed in the preceding pages, is a rather vague term—is a subject still involved in considerable doubt, and one on which great difference of opinion is now entertained. At no remote period in the history of Medicine, the principles of treatment of this disease were clearly laid down, and the practice followed logically from the principles. It was supposed that apoplexy was a disease especially and uniformly caused by a superabundance

of blood in the cranial cavity, that this blood pressed upon and so impaired the functions of the brain, and that the remedy therefore was to withdraw blood from the current of the circulation. Nor can it be alleged that these principles and this practice were incapable of being defended by strong arguments. A patient meets with an accident, by which a portion of the skull is depressed upon the surface of the brain, and apoplectic phenomena necessarily and almost constantly ensue; but when this pressure is artificially removed, by the operation of trephining, the functions of the brain are restored. Equally striking are the beneficial changes which often ensue from a spontaneous discharge of blood from some of the natural outlets of the body in cases of cerebral congestion—as, for instance, where a threatened apoplexy is warded off, or an apoplectic condition is relieved, in a female by the flow of the menses, or in a man by the hæmorrhage from piles. Examples, too, were by no means wanting (and I have often seen such cases myself), where a prompt bleeding, practised in the case of a patient who had fallen down in an apoplectic fit, was attended with immediate relief, and followed by a disappearance of all the symptoms. Such a person, in fact, was overpowered by the pressure of blood on his brain, and experienced the same partial abolition of the vital powers as he would have done if some extraneous body had been artificially introduced between the skull and the cerebral mass, or as if some depressed portion of the skull had produced a similar effect; and the removal of the pressure, whether caused by mechanical means, or by abnormal fulness of the cerebral vessels, would be followed by immediate relief.

Such are the modes of reasoning which may be adopted in favour of the abstraction of blood from the system in cases of apoplexy; and if it were proved that the disease always depended upon mere fulness of blood within the cranial cavity, the practice might still perhaps be amply justified. But, unfortunately, the progress of pathological enquiry has shown that mere superabundance or deficiency of blood has but little connection with the causation, or the prevention, or the cure of many cases of apoplexy; and that the conditions of the disease are to be sought very often in diathetic and molecular changes in the composition of the tissues, rather than in any excess in quantity, or abnormality in composition, of the circulating fluid itself. The view formerly entertained as to the nature of apoplexy assumed the integrity of the vessels, and attributed the morbid phenomena to the force exercised upon those tubes by blood, superabundant in quantity and rich in solid constituents; but recent researches have compelled the physician

to regard the whole question from a totally different point of view. There are, it is true, some human beings so happily constituted that, during a long life, no diathetic malady has sapped the foundations of their health, or led to degeneration of any of their tissues; and such persons attain to a tranquil old age, and at last die from sheer wearing-out of the bodily framework. But in too many instances, either latent maladies, hereditary or acquired, or more open and obvious visitations of disease, are exerting their baneful influence among the tissues, are causing hypertrophy in some and atrophy in others, are softening one set of organs and hardening another set, are converting elastic vessels into brittle or rigid tubes, or are blocking up those tubes with solid plugs, or are introducing oil-globules in the place of healthy cells and fibres and sarcous elements; and, in short, like the trap-doors lying concealed on the bridge 'of life, as seen in the vision of Mirza,* they are stealthily undermining the integrity of the organs and tissues of the body, and a "plurima mortis imago," as Virgil expresses it, is leading the victims, by multiform aspects of disease, into the gulf of eternity.

When, therefore, the essence of apoplexy is proved to consist of a brittleness of the coats of arteries, leading to their easy rupture and the extravasation of their contents, or when the same disease is induced by the bursting of a cerebral aneurism, it is idle to expect that blood-letting, or indeed any other measure, will remedy the primary source of the mischief. But, on the other hand, it must be recollected that, during life, it is often impossible to distinguish with certainty the cases due only to congestion from those in which there is disease of the arterial coats; and it is still more important to bear in mind that, *even when extravasation has ensued from the latter condition*, the case is not hopeless. The effused blood may be, and very often is, absorbed, and the patient is restored to health, perhaps to undergo subsequently another seizure, or even a succession of seizures.

I cannot, therefore, altogether agree with Trousseau in his indiscriminate condemnation of blood-letting, in any form, in every case of apoplexy; and looking back to three of the cases recorded in the present paper, I cannot help thinking, if the menses had returned (or, in other words, if there had been a loss of blood), in the case of the girl who died of congestive apoplexy, and if, in the case of the gentleman, who died suddenly from the same cause, some blood could have been abstracted, that in both cases life might have been preserved. In the case of softening of the brain, too, although I

* Addison's *Spectator*.

have admitted that the bleeding did no good, it clearly did no harm, and, indeed, Nature made a spontaneous effort to relieve the symptoms, a copious epistaxis taking place a very short time before death. Nor, while I agree with Trousseau that blood-letting is often useless in sanguineous apoplexy, can I admit that such a measure is always injurious; and I altogether disagree with him in regarding congestive apoplexy and epilepsy as identical diseases, a view which he clearly sets forth in his lectures.*

The subject of treatment in cerebral diseases is a very wide and a very difficult one, and one on which I have no dogmatic opinions to offer. For the present, I must repeat the observations which I made and published many years since—namely, that the treatment must depend, *not upon the name given to the disease, but upon its pathology, as indicated by its diagnosis*. The diagnosis is often very difficult, and this difficulty should inspire great caution in the therapeutical means employed. Still there are positive and negative indications which should guide our treatment, and which are often sufficiently plain when carefully considered. I fully indorse the opinion of Trousseau, that blood-letting has too often been performed in an unnecessary and injurious manner in cerebral disease; but, nevertheless, I still think that this mode of depletion is very valuable when cautiously performed, and when the state of the pulse admits of its adoption. As to other measures, they are, and must be, of the most varied description, for one case may be benefited by emetics and cold affusion; a second shall yield to opium and brandy; a third shall require the cautious abstraction of blood; a fourth shall demand the use of calomel and purgatives; a fifth shall be relieved by generous diet; a sixth shall imperatively necessitate a system of rigid abstinence; and a seventh shall with propriety be left to take its course.

Nullius addictus jurare in verba magistri,
Quo me cunque ferat tempestas deferer hospes.

* Lectures on Clinical Medicine, Lecture II.

ART. V.—REMINISCENCES OF LUNACY PRACTICE.

BY JAMES GEORGE DAVEY, M.D., Bristol.

I PURPOSE in the following remarks to record the experience through twenty full years—or from January 1, 1853, to December 31, 1872—as realised at Northwoods. Although such “experience” included periods of time both anterior and subsequent to, or outside, the two dates here given, I prefer that this report should embrace only the time (twenty years) intermediate to the aforesaid dates.

The arrangement indicated may be said to give a certain order, or completeness, or fixity to the report, not otherwise attainable. I may, however, premise that I became the licensee of the Northwoods Asylum in June 1852. At this time there were 25 patients in the house—viz., 11 males and 14 females. Of these one only (a lady) appeared curable. On January 1, 1853, there were but 24 patients—viz., 11 males and 13 females. During the latter half of 1852 one gentleman was admitted, whilst another was removed, being “relieved.” The lady referred to above was discharged “recovered;” so it happened that the number of patients was on the first day of 1853, 24 only, each of these being incurable. The gentleman admitted, it should be stated, had been insane for a period of not less than thirty years.

The annexed table conveys, at one view, a summary of the admissions, discharges, and deaths:—

ADMISSIONS, DISCHARGES, AND DEATHS AT NORTHWOODS DURING TWENTY YEARS.

	Male	Female	Total
Patients in the house on Jan. 1, 1853	11	13	24
Admitted during twenty years, from Jan. 1, 1853, to Dec. 31, 1872	59	71	130
Total cases under treatment during twenty years	70	84	154
	Male	Female	Total
Discharged and removed:			
Recovered	23	39	62
Relieved	18	18	36
Not improved	7	6	13
Died	16	11	27
Total discharged and died in twenty years	64	74	138
Average numbers resident during twenty years 24.			

You will see that of 130 admissions there have been discharged "cured" 62. You will see also that 36 other patients have left the Asylum "relieved." Thus 98 of the 130 admitted are disposed of, and in a manner no way unsatisfactory. To put the case in other words, and in round numbers, two patients in every three of the treated, viz. 154, left the Asylum either restored to health or "relieved;" the proportion of the former to the latter exceeding five to three.

Under the heading "not improved" but 13 appear; but for this you will be fully prepared when I put you in possession of the character and very unpromising nature of some at least of the 130 patients admitted. Thus 2 of these were more than seventy years of age; 9 were suffering from confirmed general paralysis; 5 were epileptics; 6 were reported as having been insane over five years; one was an idiot, and another was in an advanced state of phthisis pulmonalis; making a total of 24 incurables—individuals quite beyond the reach of anything else than a mere palliative treatment.

In reference to the foregoing experience, it may be added that the highest number of admissions in one year was 14 in 1859; but 6 of these were transfers from the Fishponds Asylum. With this one exception the highest number of patients admitted in a single year was 9, and the lowest number was 3; the average admissions per annum was 6. As to the deaths, these reached through the twenty full years but 27, the particulars of which are recorded in the annexed table; four deaths you perceive took place in 1870, whilst in 1857, and again in 1861, not one occurred. On two different occasions, and for a short time, there were 30 patients under the roof—viz., 15 males and 15 females.

A reference to the last Report of the Commissioners in Lunacy will inform you that the "proportion per cent. of the aggregate number of recoveries to the aggregate number of admissions" into all kinds of asylums during the past fifteen years is a fraction under 34 per cent. The honour of realising the highest average of recoveries during the period named rests, it is shown, with the "Registered Hospitals"—in these the recoveries were as high as 38·91 per cent.—and the misfortune of realising the lowest average of recoveries in the same fifteen years is due to the "Private Homes," their average being so low as 9·15 per cent. It is, as you will suppose, a source of no ordinary pleasure to myself to be in a position to demonstrate, as the result of twenty years' experience at Northwoods, an aggregate proportion of recoveries to that of admissions amounting to but a fraction under 50 per cent.

CAUSES OF DEATH IN TWENTY-SEVEN PATIENTS, BETWEEN JAN. 1, 1853, AND DEC. 31, 1872, OR, DURING TWENTY YEARS.

		Male	Female	Total
Cerebro-spinal diseases	Apoplexy—Sanguineous	1	—	1
	„ Serous	—	1	1
	Epilepsy	1	—	1
	Exhaustion after mania	—	2	2
	„ „ melancholia	—	1	1
	„ „ dementia	—	1	1
	General or progressive paralysis . .	2	—	2
	Total . .	4	5	9
Thoracic diseases .	Valvular heart disease and anasarca .	2	—	2
	Acute pneumonic phthisis	1	—	1
	Pleuropneumonia	1	1	2
	Phthisis pulmonalis	2	—	2
	Angina pectoris	1	—	1
	Total . .	7	1	8
Abdominal diseases .	Bright's disease	—	1	1
	Diarrhœa	1	—	1
	Total . .	1	1	2
General diseases . .	Senile decay	3	1	4
	Syncopal asphyxia	1	—	1
	Total . .	4	1	5
Local diseases . .	Carbuncle. . . .	—	1	1
Special causes of death	Suicide by hanging	—	2	2
	Total . .	16	11	27

Furthermore, a reference to the last Report of the Commissioners in Lunacy will inform you, that a comparison of the daily average number of patients through the same fifteen years with the number of deaths yields a percentage of 7·54, and that this, the lowest average at any kind of asylum, is due to the “Registered Hospitals.” If, however, the number of deaths is compared, not with the daily average number of patients, but with the total number under treatment through the whole time named, then again is the palm seen to be due to the “*Registered Hospitals*,” their number of deaths to each 100 of the total number under treatment being so low as 5·51. I have,

then, an additional gratification in having realised at North-woods, during twenty years, a percentage of deaths—based on either one of the calculations adopted in the said Report of the Commissioners of Lunacy—yet below their lowest on record.

It is well worthy of remark that insanity is not, *per se*, a very fatal disease, although the subjects of it die at a more rapid rate than the sane. The causes of death among the insane are, as the table just referred to shows so plainly, as frequently as not outside the organ primarily affected. The fact is doubtless to be viewed, if not as a consequence of, then in connection with, the wear-and-tear of the forces of life, involved so materially in the insufficient and disturbed sleep—*i.e.*, the emotional and mental disturbance so characteristic of cerebro-mental disease. The whole organism is, as the rule, prostrated; it is in no position to recover its lost tone and energies—their recuperation becomes almost an impossibility. The due nutrition of the body is so materially interfered with, that each one of the many organs—the heart, the lungs, the liver, kidneys, and what not—is brought to the very verge of disease, and its susceptibilities to abnormal action so intensified, that to escape the consequences of exposure to even the most ordinary or diluted morbid agency can hardly be expected in very many of the insane. Hence, then, the frequent occurrence in them of heart-disease and dropsies, of phthisis and other chest affections, and of carbuncle—including, too, *mollities ossium* and allied states of the skeleton.* As an additional and

* It was in the year 1842, when Medical Superintendent of the Female Department at the Hanwell Asylum, and when much engaged and interested in *post-mortem* investigations there, that I detected the existence of *mollities ossium* (“*osteo-malacia*”) in those dying insane. This very important fact is recorded and commented on at pp. 258 to 265 of my book, *The Ganglionic Nervous System: its Structure, Functions, and Diseases* (1858). I have therein referred to six cases wherein *mollities ossium* and insanity were found coexisting. The former, it is affirmed, “may be confined to one or two bones, or even to portions of the same bone.” Of these six cases, four “were afflicted with ‘general paralysis.’” In the *Medical Times*—No. 170. vol. vii. p. 195 (1842)—will be seen the record by myself of a highly instructive *post-mortem* examination of a female patient who died under my care at the Hanwell Asylum, and in which patient I found so many as six spontaneous fractures of the long bones, as well as a very considerable portion of the skeleton occupied or converted into a dark, semi-calcareous, grumous matter. It is within some half-dozen years that the complication of the two diseases above-named (*mollities ossium* and cerebro-mental disease) became to any extent recognised in the profession; and when such was the case, the fact was not only ignored by the press, medical and non-medical, but treated as simply a very poor subterfuge, or as an apology, and a very lame one too, for the broken and crushed ribs of insane patients, inmates of our lunatic asylums. In this matter the *Pall-Mall Gazette*, the *Lancet*, and the *Journal of the British Medical Association* have much to answer for to the medical superintendents of asylums, of whatever kind, private or public.

It may be added here that the existence of soft and fragile, *i.e.* “rickety,” bones in those dying insane has been found of late years by many medical men. Thus Dr. Thomas Dickson, Dr. F. W. Moore, and Dr. J. C. Browne are the authors

practical demonstration of the foregoing remarks, let me refer to this other table:—

STRUCTURES AND ORGANS AFFECTED, THEIR PROPORTION, AND RELATION TO PARTICULAR FORMS OF MENTAL DISEASE.

Number of cases	Form of Disorder	Calvarium	Dura mater	Arachnoid	Pia mater	Grey substance	White substance	Ventricles	Heart	Lungs	Stomach, bowels, and peritoneum	Liver and spleen	No morbid appearance
19	Mania	4	3	9	—	11	4	1	9	11	6	8	2
11	Mania with epilepsy .	1	2	10	—	6	2	2	6	3	—	1	1
7	Mania with general paralysis	3	1	8	1	3	3	2	—	2	—	—	—
15	Melancholia	1	3	12	3	4	2	3	3	8	4	1	2
19	Dementia	7	1	19	—	15	6	2	3	12	4	5	1
7	Ditto with epilepsy .	—	1	—	—	4	2	2	2	3	1	—	—
3	Ditto with general paralysis	—	1	3	1	2	2	3	—	—	—	—	—
2	Ditto with epilepsy and general paralysis .	—	—	2	—	2	—	1	—	—	—	—	—
17	Not stated	8	3	14	1	5	3	2	3	5	5	1	2
100	All forms	24	15	77	6	52	24	18	26	44	20	16	8

It is extracted from a small book, *The Nature and Proximate Cause of Insanity*, which I published nearly a quarter of a century since, with the view to prove that, whatever may be the amount of morbid change in the brain and its coverings, however broken up and softened the cineritious neurine, to whatever extent adherent it may be to the pia mater, and altered in colour, &c., and that, however much or little the arachnoid may be thickened and opaque, and whatever may be the amount of fluid contained in its sac, or elsewhere about the cerebral membranes, the first cause or starting-point of madness must be sought elsewhere than in any one or more of such conditions—that, in fact, the truth of the matter lay much deeper down than is too generally suspected, and, what is more asserted.

That a morbid sensibility of the ultimate cell-structure of the grey matter of the convolutions lies at the root of insanity, through each one and all of its many varieties or phases of being, is at this time an accepted fact in pathology; and that

of cases which prove the correctness of my own conclusions, arrived at in 1842; to the effect that there is a decided connection between brain disorder and bone degeneration; and, furthermore, that such is, in its entirety, the sure and certain outcome of disease originating in the nervous system, *i.e.* in the *ganglionic nervous system*; on which system the cerebro-spinal organism is, as its functions are, wholly subordinate and dependent.

this same "morbid sensibility" it is which, when continued, so damages the normal contractility of the capillaries, "that their relaxation or distension is inevitable":—a state of things this which is alone necessary to the creation and development of the several alterations of structure noted in the foregoing table. Truly, the disorganisations named above, and seen in the brain and its coverings, are the direct effects of inflammation, acute or chronic, sthenic or asthenic; but whatever the amount of inflammatory action there may be, it must be held as due originally to a deficient and impaired innervation; for how certainly is this indicated, or portrayed, in the too painful restlessness and agitation, the excitement without power, the incoherent and ceaseless speech, the rapid yet objectless muscular movements (the motions without force), the acute and oft-succeeding facial expressions, as well as by the rapid thread-like pulse, the cold or hectic skin, and failing vital powers, which mark so very generally the recently insane patient, whether male or female? *

It may be, and very probably is, a source of some surprise to a few that, in the preceding Table of Admissions and Discharges, there is scarcely a mention made of the words *mania*, *melancholia*, *monomania*, *dementia*, &c., as so many kinds of insanity. The fact is, too much importance has up to this time been attached to these mere words; they fail to convey else than partially what they are designed to do. I have, for a long course of years, felt how inappropriate and unreliable such words are, as applied to individual cases of cerebro-mental disorder. Inasmuch as such words express only the most evident or the temporary signs or symptoms of any given case, and are, therefore, out of harmony or in little accord with a scientific pathology, the propriety of their use becomes very materially modified. Whilst admitting this, I would caution the student of medicine in accepting too eagerly the teachings of the late Dr. Skae.

* The views here expressed in regard to the nature and proximate cause of insanity were originally broached in a paper entitled *The Pathology of Insanity*, published in 1843 in the *Zoist*, edited by the late Dr. Elliotson. In my *Contributions to Mental Pathology* (1850) the same are repeated with much detail. Precisely identical views in regard to the disease (insanity), its origin, progress, and termination (when not relieved or cured), in the several alterations of structure or disorganisation named in the text, were given to the public by Dr. Henry Munro, in a book entitled *Remarks on Insanity, its Nature and Treatment*, published in 1851. Moreover, Dr. John Hitchman has, on more occasions than one, thought himself the first to put such views before his medical brethren. I doubt not Dr. Hitchman's originality, nor do I hesitate to admit that when he gave to the world, in his "Lectures on Insanity," published in vol. ii. of the *Lancet* (1847), his convictions concerning the nature and proximate cause of insanity, he had no kind of idea that he was but repeating my own. (See No. 26 of *Journal of Psychological Medicine* for April 1854.)

His sketch of the many forms of insanity does not, as I believe, cover the whole case. The really sound basis is wanting; because, simply, Dr. Skae accepted not the discoveries of Gall and Spurzheim. The teachings of these famous physiologists are ignored in Dr. Skae's very highly commendable and painstaking endeavours to advance mental science and simplify its nomenclature. My own opinion on this point I may be permitted to convey in a quotation from a pamphlet of my own, entitled *Medico-Legal Reflections*, written now a generation since:—"The term insanity conveys the idea of unsound mind, and in order to express its varieties, the words mania, melancholia, monomania, dementia are in common use. Such impart no more than a general notion of the character of the affliction, or of its various symptoms or phases—symptoms or phases, bear in mind, which may or may not change or vary day by day, and this in even the same patient. Then, again, disease of the brain may be confined to a part, or it may affect the whole of the organ, the disease or impairment of function being at the same time the consequence of either excessive or diminished action—*i.e.*, sthenic or asthenic; and in any case it may be organic or functional—furthermore, of either an idiopathic or a symptomatic nature. The various signs or indications of such several phases of mental disorder are recognised by the general term insanity.

"But if the morbid signs or conditions of the many organs of the body, including of course the brain, are severally indicated by well-marked or specific functional disturbance, it must follow that if the brain possesses—which it most certainly does—parts or organs, the offices of which in the animal economy subserve the purposes of Caution, Veneration, Self-esteem, Firmness, Acquisitiveness, Destructiveness, Combative-ness, Ideality, Gaiety, Hope, and so on through the whole of the primitive or undecomposable affections, sentiments, and intellectual powers—call them by whatsoever name we will—then we see, plainly enough, that a derangement of the mind (insanity), considered in the abstract, might be, as it is, caused by disease affecting one or two or more of such organs (functions) exclusively. Herein, then, we get at the only clue whereby to unravel whatever of mystery may attach to insanity, in the abstract, as well as to its many varieties and complications."

As complementary to the foregoing tables, and the remarks made in reference to them, I will divide the remainder of this paper into certain practical heads, and these shall follow each other in the following order, *viz.* :—

1st. The admission of patients.

2nd. Treatment of insanity—hygienic and medical.

3rd. Seclusion and restraint.

4th. Suicidal patients—their management, &c. Cases.

5th. Refusal of food. Instrumental feeding—its use and abuse demonstrated.

6th. Discharge of patients—the responsibilities connected therewith.

7th. Conclusion.

In regard to the first matter named—the admission of patients. The removal of one mentally afflicted from his or her home and its surroundings to an asylum is no trifling affair; it requires to be effected with much circumspection, and only after the best consideration of all the circumstances of the case. To begin well is almost to command success.

Now the common practice is not only to anticipate much trouble and many difficulties in connection with such removal, but to invent no end of equivocations, and even falsehoods, with the view to deceive the patient. Such a course of action can lead to no good—quite the contrary. In our intercourse with the insane we must ever be candid and truthful, for they are by no means ignorant of the kind or nature of the terrible disorder which is prostrating them, nor are they unaware of the aim and character of the attentions paid to them. Such being the case, and the said removal decided on, the patient should, as the very general rule, be told as much, fairly and plainly. This done, the matter becomes in no small degree simplified, or so I have found it. The patient acquiesces, or, at any rate, he manifests no prolonged or stubborn disapproval or resistance to his leaving home, and with a little careful management he is led to adopt your views so far as to allow himself to be dealt with as is seen best.

Now the object of such removal being to surround the patient with the most efficient curative means—to give him the benefits to be expected from new and altered conditions of being—it follows that asylum-life (so to put it) should combine the very best sympathies of our common nature with the most approved attention to sanitary matters, as well as to those strictly medical. The first great object is to assure the patient that his residence in the asylum is attended with no real loss to him—that he is still with friends who can and do sympathise with affliction—that no means will be neglected to promote his wellbeing and personal comfort—that the best and most approved remedies, both palliative and otherwise, will be sought for and adopted day by day, to meet the difficulties and dangers of his case, and to insure, as far as may be, the relief and cure of a too painful malady. The confidence of the patient gained, this sure foundation laid, the good result, the

superstructure, may be hopefully anticipated. There must be no going back, no retrogression. Such the starting-point—the vantage-ground so gained must never be lost. And this can hardly be if asylum-life is what I have just said it should be—that is to say, if it embraces the laws of health in their entirety, and these are so contrived or disposed of as to create and sustain, so far as possible, among its inmates the *mens sana in corpore sano*. Such laws (of health), it need hardly be said, must be paramount in every asylum, and must fasten themselves on the attentions of all concerned in its management. Without order, cleanliness, warmth, pure air, good and abundant food, a due amount of exercise, occupation, and amusement daily, not forgetting that kind and efficient yet discriminating attention and surveillance a real sympathy with suffering will ever beget and sustain, what of either relief or cure of mental disorder can be looked for or expected?

Now the views given above as to the seat and nature of the proximate cause of cerebro-mental disease will have prepared the reader to anticipate in no slight degree my notions regarding its strictly medical treatment. If we would relieve the *morbid sensibility* of the grey neurine, if we would allay the consequent restlessness and sleeplessness in him insane, if we would counteract the damaged nutritive processes occurring to the brain, and repair the sympathetic derangements of the several vital organs, we must, to begin, seek the pretty sure aid of the chloral hydrate or other sedatives, as the bimeconate of morphia and chlorodyne. In cases of violent mania, when the patient resists, and will not take medicine, the subcutaneous injection of the salts of morphia may be employed with sure and excellent effects. The hot bath, with the free use of cold water to the head, or (what is better) the careful application of the æther-spray to the scalp, will frequently be found an excellent hypnotic, and as such afford much relief to the patient. Those who have witnessed the experiments by Dr. Richardson, of London, with his æther-spray on animals and birds will be well prepared to endorse this opinion. Nothing can more effectually diminish the calibre of the bloodvessels, and so lessen the volume of blood circulating through, or rather in contact with, the brain, and withal restore the *bonâ fide*, organic, and normal condition of the cerebral circulation, anterior to and during sleep, than this æther-spray.

Useful, even indispensable, as sedatives of one kind or the other are in madness, and however much they can, and do, soothe and calm the patient, allaying his emotional extravagance or excess of feeling; yet must it be borne in mind that we have to combat a formidable evil in the wear-and-tear of

the forces of life, in the undue pressure imposed on the nutritive processes common alike to the brain and the many vital organs, and whereby, as has been remarked, they are brought to the very verge of diseased action. To counteract this "formidable evil" we must have recourse to a liberal dietary, including, as the general rule, wine and good beer, and, it may be, brandy or some other spirit. Now and then, though rarely, one sees a case of sthenic mania, the consequence—more generally than otherwise—of local injury; but even such cases will hardly bear a lowering or antiphlogistic treatment. If you abstract blood by cupping, or by the aid of leeches, you must allow, at the same time, plenty of good fluid, meat, rice, milk, and eggs—also, perhaps, bitter beer, or some light claret wine.

During my residence in Ceylon, from 1844 to 1849 inclusive, the principal charge of the Government General Hospital devolved occasionally on myself. At such times I have had to treat cases of injury to the head inducing insanity. Such injuries are unusually frequent at Colombo, where the cocoanut plantations abound; and so it was the opportunity was afforded me of realising the really sound and practical value of the late Mr. Guthrie's teaching in regard to *Injuries to the Brain Causing Madness*. In the book referred to the surgeon is cautioned "against the indiscriminate use of the lancet in such cases, employed with the view of reducing inflammation of the brain, or of its investing membranes." It is added, "that the persistence of mental derangement, regarded as an effect of local injury, may or may not call for the abstraction of blood, and other evacuants; that it is very commonly found necessary to administer sedatives, as *Dover's Powder*, to allay the irritability present in the parts within the cranium; and (such is the liability of the patient to sink from direct physical exhaustion—the consequence of the mischief done to the brain) that the strength must be supported throughout, by the administration of good beef-tea, and the like."

But to venture on the treatment of even a case of acute *idiopathic* insanity, omitting "a liberal dietary," and forbidding the use of stimulants, would be to diminish very materially the chances of cure in any given case, and to multiply the number of those incurably insane.

To withhold such a dietary from those chronically affected—the inmates, for example, of the large county and borough asylums—would be to increase the percentage of deaths among them to a frightful degree. This much is demonstrated in the histories of such institutions, and especially in the history

of the large asylum at Hanwell. When, some five and thirty years since, I became officially connected with Hanwell—when, too, I carried into practice the foregoing views as to the dietary—the House Committee were with some difficulty led to approve “the extra diet list” suggested. What struck me at Ceylon, on my arrival there in 1844, was the insufficient and poor quality of the food allowed both to the European and Cingalese insane, and *the high death-rate*. From information given me, I discovered that the island contained nearly 500 lunatics; that these were scattered much about—some in the gaols, and more in the leper hospitals; and that the mortality among them was so high as 33 per cent. But the partial collection of the insane, European and native, into a new asylum—the completion and organisation of which was my especial mission—followed as this was by an altered and a liberal dietary, by the better feeding of my patients, brought the death-rate down to, first, 23·3 per cent. per annum, then to 15, and at length, and after four or five years, down to 7·50 per cent. per annum. However, so little understood were the above facts, in so far as the experience at the new asylum at Colombo was concerned, that it was suggested to me, officially, that “the excitement” of lunacy could be relieved only by a “spare diet.” I need hardly add that the proportion of recoveries was materially added to, whilst the number of deaths, as above shown, was much reduced. The mean average of the first (the recoveries) went up from, say, 6 per cent. per annum to nearly 40 per cent. per annum, whilst the death-rate fell, as is seen, from 33 per cent. per annum to 7·50 per cent.

It may be added here, that a comparison of the six years preceding my arrival in the colony with that of the same period succeeding it—or during my sojourn in the colony—shows a falling-off during the latter six years in the number of deaths to the extent of 20 per cent. per annum; and the like comparison, in so far as the ratio of cures is concerned, yields an increase in favour of the latter six years of nearly 40 per cent. But this result of treatment was not reached without much struggling with old prejudices and ignorances. The Commissariat Department, acting under the friendly advice of medical authorities of long experience with disease within the tropics, insisted on it that “*so much nutriment could hardly be beneficial to lunatic patients, who are generally in a state of great excitement and fury,*” as that I required for them.

It is quite impossible to dwell on experience such as the above without a keen appreciation of the teachings and good results of medical science, as adapted to the mind’s disorders or abnormalities.

The good effects of a liberal dietary may be enhanced by the use of medicines of a tonic and stimulant character—for example, the citrate of ammonia and iron, the citrate of quinine and iron, the syrup of quinine with iron and strychnia, and the compounds of cod-liver oil with quinine or iron or strychnia. The solution of phosphorus manufactured by King, of Crawford-street, Montague-square, London, is a valuable medicine in cases of debility involving the great nervous centres. One or other of these medicines, if given discriminatingly, does good, and promotes the return of health—the *mens sana in corpore sano*.

Of the patients admitted at Northwoods, the majority presented signs of more or less disturbance of the organs concerned in digestion. The *primæ viæ*, of which we hear nowadays much too little, though so commonly at fault, are ignored or put on one side, for the sake, as it appears to me, of certain imaginary germs, and the means whereby such may be poisoned or slain withal. However, we may be quite sure of this: so long as such *primæ viæ* are depraved, or incompetent to the right discharge of their important offices in the animal economy—so long may we bother our patients with sedatives of whatever kind, and with tonics, vegetable or mineral—so long may we direct what they may eat, drink, and avoid—so long suggest what we may in the matter of hygiene, &c. &c.—so long, I say (the *primæ viæ* being in an abnormal state), will all prove in vain, and of no real good.

I am never satisfied as to the real state of a patient until I have examined, with care, the alvine and renal excretions. If such are found to be normal, both as regards quantity and quality, well and good. But this is, I believe, rarely the case; for the bowels are perhaps constipated, or the stools are wanting in bile, though diarrhœa is present. The urine is seldom seen in a natural state in the early stages of insanity. It is generally thick and turbid, of a high specific character, and abounding in the salts of urea. In patients of a melancholic tendency the urine will, very likely, be found to contain also oxalic acid, or oxalate of lime crystals. Now, such a state of things tells us, plainly enough, that “the sewage of the body” (so named by the late Golding Bird) has been and is insufficiently discharged; and that, therefore, the entire organism is being damaged (poisoned) by the contact of *nitrogenised substances*, the product of that metamorphosis of tissue ever going on in each of us. If such *sewage*, or retained *nitrogenous substances*, are—as is asserted and believed—not less poisonous than the deadly secretion of the puff-adder is to a person into whose blood its fatal bite has conveyed it, then indeed must it be our very

first endeavour to rid the system of our patients of all such. This we can do by purgatives, fairly and fully adapted, in the matter both of frequency and potency, to individual circumstances or cases.

The seclusion and restraint of the insane are matters which have begotten of late much warm discussion. Doubtless there was a time when both of these very important means of relief and cure of the disordered mind were much and dreadfully abused. But of this I am confident, that the right use of both seclusion and mechanical restraint has been, and is now, somewhat neglected—and this with the sad and humiliating effect of aggravating disease, and of adding not a little to the difficulties and dangers of asylum management. The *total disuse of seclusion*, and not less the *entire abandonment of restraint*, though advocated by one or more medical men engaged in asylum practice, is, as it appears to me, not only absurd, but sometimes mischievous; and it may be more even than this. Many a superintendent has, it is to be feared, been ere now deterred from the employment of seclusion and restraint, when one or the other was urgently needed. Seclusion—in itself an invaluable sedative, and, not unfrequently, the very best substitute for chloral hydrate and suchlike—is, no doubt, from time to time too long delayed, or altogether omitted, and the doubtful surveillance of attendants sought in its stead. There are, of course, cases to which seclusion is especially adapted—cases the symptoms of which are aggravated by any other or the more ordinary resources of our art—*i.e.*, by the presence of attendants, by outdoor exercise, or diversion in any way. Remedies, of whatever kind, must be selected, regard being had to the requirements, or peculiarities, or susceptibilities of any one patient. A gentleman now at Northwoods secludes himself voluntarily, if not in the padded room, then in his bedroom. He feels wretched and excited at such times, and when alone he is relieved. As an exception to this rule of his, he will sometimes prefer to walk, which he does in good earnest, with long and rapid strides, up and down the garden, or airing-court, so called. A medical friend suffering from an acute form of mania came under my care not a long time since. The excitement reached now and then a painful climax; his rage and disorder knew then no bounds. At such times I gave him a full dose of the syrup of chloral, and had him secluded in a padded room. The external senses being there without any kind of stimulus to action else than the four padded and sombre-coloured walls, and the subdued light admitted through the darkened glass composing the skylight of the apartment, he became quieted. Brought as he was into a state of merely subjective

life, what so likely as to induce the required cerebral inaction or repose—what so likely, also, to aid the good effects of the chloral? The paroxysm was invariably relieved by such a proceeding. After two or three hours he became so far composed as to be easily managed and kept right—in other words, to be brought within the wholesome and benign influence of those about him.

In so far as mechanical restraint is concerned, I may be permitted to record the annexed case. Nine years ago I had under my care at Northwoods a lady, the subject of dementia of long standing. Her bodily health was so much reduced that she was unable even to sit, unsupported, in a chair. So feeble had she become, that she could walk only when resting, or supporting herself, on the arm of an attendant. In such a state of mental and bodily prostration you will not be surprised to learn that, in spite of the best attention we could give her, she ran the risk of an occasional fall. She did, in fact, every now and then tumble forward as she sat in her chair—a padded armchair—and falling on the floor, suffered much from mental agitation and alarm, and, in addition thereto, from sundry hurts and bruises. Attendants took their turn to wait on this poor lady, to gently support or restrain her, and in the hope, and with a view, to the prevention of accidents such as those named. However, their patience, it was found, became too severely taxed, they tired of their occupation; they came to regard the patient as something akin to a nuisance, or a hard task. Such feelings, and such an estimate of the case, begat on their parts less and less of gentleness and sympathy. Ere very long it was made evident to me that the said support or restraining care of attendants, carried out, as it was, for the most part, with much kind and consistent regard for and on behalf of this deeply afflicted lady, resolved itself into a question of choice between two evils. Acting, then, on the principle, that of evils the greater should ever give place to the less, or that one the more easily borne, I directed a common shawl to be so wrapped about the patient and the chair that she could no longer fall from it to the floor, &c. &c. You will not fail to bear in mind that this restraint, or rather support, was not continuous by any means; it was used only for short and convenient periods through the day, and as a relief or change, not only to the patient, but also to the attendants. You may be surprised to learn that this very case was made the excuse, by a late Chairman of the Gloucester Quarter Sessions, to call on me to answer a charge of “being guilty of a mean and inhuman economy,” adopted “at the cost of a patient’s well-doing.” This late Chairman told the Court that the above form of

restraint was but “the symbol of rigorous and parsimonious treatment of lunatics, now happily abolished, and which must ever be discountenanced by those in high authority.” The issue of the matter was, I was compelled to abandon the use of the shawl, and put yet again the poor lady alluded to into the exclusive and doubtful or hazardous care of the attendants. So were my hands tied, and the comparative well-doing of my patient prevented. Of two evils, the one or the other of which was indispensable, I was put under the necessity of accepting the greater of them. Hard lines such as this for patients, and not less hard, perhaps, for the doctors, in whose hands rests both the patient’s well-doing and their own reputation.

You will perhaps agree with me when I add, in the words of Cowper—

All constraint,
Except what *wisdom* lays on *evil* men,
Is evil, hurts the faculties, *impedes*
THE PROGRESS IN THE ROAD OF SCIENCE.

and, it may be said also, delays the advent of TRUTH.

But exclusive systems of whatever kind, call them by whatever names we may—by Teetotalism or Alcoholism, Puseyism or Sectarianism, Hydropathy-ism, Mesmerism, including what may be called Restraint-ism—will have their own little day, yet is each one of them doomed to be beaten back to its fair proportions and legitimate belongings. We are assured of this, as a mere fact, by the growth even now of better and sounder views of the “*non-restraint* system,” so designated. In the *Journal of the British Medical Association* for November 23, 1873, there is seen these words—they appear as editorial remarks :—

NON-RESTRAINT IN LUNACY.

“In the opinion of the *Edinburgh Medical Journal*, although England may justly claim the merit of having done much to introduce a more humane treatment of the insane, there is no chance of our insular notion about totally dispensing with restraint being adopted, either on the continent of Europe or in America, while, of late years, in Great Britain there has been a steady and powerful reaction against the extreme views of the ‘non-restraint’ men. Superintendents, like Dr. Lauder Lindsay of the Perth, Dr. Yellowlees of the Glamorgan, and Dr. Murray Lindsay of the Derby Asylums, have gained the distinction of boldly stating views which were getting every year more general and more decided, that the utter abrogation of mechanical restraint in all cases of mania was a notion only fit for *doctrinaires* who do not understand the real exigencies of asylum superintendence. In a notice in the *Allgemeine Zeitschrift für Psychiatrie* (1871, p. 604) of Dr. Kellogg’s Report on English Asylums, the writer remarks :—‘As for

no restraint, he holds the strict carrying out of it as a sentimental humbug (a true word)—(*für einen Sentimentalitätshumbug*. Ein wahres Wort). From private accounts and the most important journals of England, there is preparing a powerful opposition against the extravagances of no restraint.' In like manner, the superintendent of an asylum of eight hundred lunatics, in France, gives his views on the subject in the *Annales Médico-Psychologiques* (1871, pp. 375, 376): 'Whatever the English doctors may say, these means (*camisole, manchettes*) are better than confinement in a cell and the manual force of keepers. Almost constant imprisonment in dark and padded cells cannot but become hurtful to the patients in all points of view. As for the oversight and repression of keepers, this measure often gives rise to frequent struggles and scenes of disorder and tumult in the ward, for the other patients become excited in their turn. It may be retorted, in defence of the system generally employed in France, that the no-restraint of the English (surveillance and repression by the keepers, and constant isolation in cells) is only physical restraint in disguise.'"

Some of these words may have been better chosen, or of a milder character, and not so highly coloured. They contain, nevertheless, a large proportion of truth.

In these *Reminiscences of Lunacy Practice* the subject of Suicidal Insanity could hardly escape attention.

During my experience at Northwoods I have had admitted several patients—ladies and gentlemen—in whom the tendency to suicide has been more or less marked. I regret to add that two of such (ladies) did succeed in killing themselves. Two gentlemen were admitted with cut throats, and a third succeeded in inflicting a throat-wound on himself when in the asylum. Of these three gentlemen, one of the first alluded to died, not of the wound, for this had quite healed, but from cerebral exhaustion, after protracted mania; the other got well. The third is still at Northwoods, in a state approaching dementia. In reference to the two ladies, they were in a sense, and as cases exceptional to the rule, sacrificed to the "non-restraint" system. In the absence of mechanical restraint, the proper care of them was attempted through the aid of trained attendants. Two such were engaged for either lady expressly; they occupied the same bedroom with either lady. Especial supervision was enforced. Orders of the most unequivocal and decided character were given, and repeated again and again, to the effect that these patients should on no account be left alone and unprotected, &c. &c. But all to no purpose. They both succeeded in their original design; they both seized or made the opportunity to elude the watching of those having the direct or immediate care of them. They hanged themselves—the one to a portion of the bedstead, the other to a small curtain-

rod. The knees almost of both of these ladies were seen in near contact with the floor when found suspended and dead. Is it right to trust altogether to attendants in cases such as these? Can it be expected that they (attendants) will not get tired of their work?—that the monotonous character of the occupation will not in the long run prostrate them, replace them as we may and do? Attendants are but mortal—every fair allowance must be made for them. Granting—which is not always the fact—that they do really credit the continued existence in the patient of the prompting to suicidal acts, the fear is, they will succumb, or be thrown off their guard, even the best of them; and their care and watchfulness decline.

It is worthy of remark that, with all my asylum experience (from 1840 to this time) I have had to do with but three deaths from suicide, and only two of these occurred at Northwoods. The fact is due, in great part, to the protection afforded by patients to each other, the consequence of the aggregation of the insane. My charge at Hanwell consisted of some 550 insane women—at Colney Hatch of about 900. These severally kept, in a measure, their fellow-sufferers from the committal of the suicidal act, apart from, and in addition to, the general surveillance inseparable from the mere numbers of attendants under the same roof. Nor is this the only advantage connected with the aggregation of the insane. Within the last two years I have found it necessary to desire the removal of two gentlemen from Northwoods, whose violence was occasionally so intense, and whose strength withal so great, that when under the influence of acute mental emotion (mania) great risks were incurred lest my small staff (three) of attendants should prove the weaker party. They were removed to one of the large asylums, where, of course, the number of attendants was such as to prevent the possibility of any risks of a like kind. In fact, their new surroundings were, in a degree, salutary, moving them to the exercise of some restraint over their mad impulses. The gentlemen alluded to were in the full possession of their mere knowing faculties; they knew well right from wrong, and the consequences—good and bad—which follow, or are likely to follow, on either their controllable or uncontrollable impulses.

But the measure of control or its converse in the insane patient lies not so much in the knowing faculties as in the moral sense; this it is which supplies the *bonâ fide* power to do or not to do. Such power may be and is strengthened by an appeal, at one time to the higher and ennobling faculties, and at another time to the lower, the selfish passions of our nature. Correction of both the sane and the insane there must

ever be, but this correction, to be used with the best effect, requires to be served with various and dissimilar adjuncts. It has been said that—

Love,
The deep recesses of the maddened brain
Can reach, when violence fails, and gentleness,
Demoniac fury quickly can assuage,
When nought beside has power.

I fear the poet may have been a shade more practical. Love and gentleness go a very long way, and can do great things. But the admixture of some fear of consequences heightens the good effects of "correction," not infrequently, on even the insane mind; and this fact is demonstrable in the mental histories of the two patients transferred from North-woods to the larger asylum. Evidence to the same effect is seen in the case of an elderly lady now under my care. Her habits are not always what is looked for in a person reputed cleanly, but she is encouraged, and with very fair success, to obey the calls of nature, and so to promote her personal comfort, by an appeal to her "alimentiveness," or the offer of an extra piece of fruit-tart, or a sweet biscuit; for both which dainties she has, seemingly, the relish of a practised gourmand. She fears to lose the indulgence of an appetite, and hence, not unfrequently, a due control over a bad and filthy tendency is reached.

The asylum superintendent has one very marked difficulty to contend with, one which is very common to his experience. The refusal of food by the insane is an ever-recurring affair. This is sometimes but one of the many signs or symptoms of suicidal insanity. When it is so, the patient is generally of a melancholic turn. Now and then the refusal of food is the outcome of delusions: for instance, the patient is apprehensive, or possibly believes, that poison has been added to the food offered to him, and hence it is he refuses to take it. A deranged religious feeling, or a perverted action of the organ of "veneration" (to write phrenologically), does sometimes lie at the root of this particular symptom of morbid mind. I am now attending a patient in whom such a state of things did, until recently, exist. For forty days about I kept him alive by instrumental feeding. During the same period, and for a similar first-cause or origin, I was required to use the catheter, and, what is more, to rely, to a great extent, on the use of copious enemata for the due relief of the bowels. It may be added that during the same forty days it was necessary to keep the strictest watch on Mr. G., lest he should commit suicide. After several narrow escapes—and one of these from the con-

sequences of a severe and self-inflicted wound on the forearm, done when an attendant was within a few feet of him—I was driven to the occasional use of the old-fashioned strait-waistcoat. This case was one in which the refusal of food may be regarded—apart from its complications—as due to delusions of a religious character. Mr. G. was fed with the aid of a funnel-shaped machine, the nipple of the instrument, on the end of the elastic tubing attached to the apex of it being inserted into one or other nostril. This simple affair is well adapted for some patients, but not for all. It is very simple, easy of application, and succeeds well when the patient offers but little resistance. The whole contents of the funnel may be made to pass by its own weight into the tubing, and through the stopcock attached to the nipple, as that occupies the inlet to one or other of the nostrils, and onwards through the inferior nares and the pharynx, thence to the œsophagus and stomach with but little trouble. There is just this one point to be attended to—the operator must keep the finger and thumb on the stopcock, and so prevent the too rapid passage of the beef-tea or milk, &c. through it and the nostril, so that the excitomotory act which occurs to the pharynx may not be interrupted or drawn on too eagerly.

When a positive resistance is offered, and the patient has a fair share of strength to back up such resistance, the use of the stomach-pump is advisable. Last year I admitted two patients, a gentleman and a lady, each of whom I had occasion to feed with the stomach-pump pretty nearly every day, and this for weeks. The gentleman died—he was over seventy years of age; the lady was eventually discharged “recovered.”

In the more common cases of refusal of food no such instrumental means as those referred to here are necessary. Such refusal being the result merely of some temporary or fleeting caprice, due not unfrequently to the hysterical temperament, calls more generally than otherwise for no very marked attention.

It is important, however, to bear in mind that the refusal of food by the insane may exist independently, more or less, of the mind's disorder, and may arise from a state of dyspepsia. When this is the case, if we clear out the bowels, and so render the secretions normal, such refusal will trouble us no longer. It does not follow, then, that because a lunatic refuses to eat he should always be fed. This fact I would further illustrate by the annexed case, that of an elderly gentleman, the subject of long-standing melancholia. Although slowly dying, and in the most natural manner possible, it was hoped to save him by forcible feeding—*i.e.*, by the artificial introduction of food into his stomach. But this organ not being in a state to receive

aliment, and the system itself fast losing its natural and vital endowments, of what utility could food be to this dying man?

The following sentence, quoted in Pereira's work on "Diet," from the late Dr. John Conolly, is so much to the point that I venture to introduce it here:—

"The cases of refusal of food by insane patients are chiefly of two kinds:—*one*, in which food is refused in consequence of some delusion, or some vow, or from mere obstinacy—the patient being in tolerable bodily health, or certainly not incapable of digesting food; *another*, in which it is utterly repugnant to a stomach in a high state of disorder.' In the first description of cases, if all other means (such as varying the food, persuasion, &c.), 'tried with the utmost patience, fail, it is justifiable, and even necessary, to introduce food into the stomach by artificial means.' This is usually effected by the stomach-pump. 'In the second, the condition of the patient is entirely different. The tongue is red, or thickly coated; the bowels are disordered; there is present a low kind of fever; the brain is highly excited, and the patient almost too feeble to stand or walk, except by sudden and frantic efforts. His face is pale, the eyes are sunk and wild in their expression, and the whole frame is emaciated to an extreme degree. All these are so many sure signs of death ensuing on long-continued disease of the brain, with all its complications. Nowhere except in a lunatic asylum would such signs of sinking life be recorded as the result of food being refused. The aversion to take food arises, in such cases, as in cases of fever, from the general and terrible disorder of the system—from a diseased condition of the stomach itself, among other organs, associated with a brain disturbed to excess. To force food into the enfeebled and dying stomach of such patients would not be sanctioned by any well-regulated hospital, or by any competent physician; and their distinction ought not to be overlooked because they occur in an hospital for the insane.'"

The discharge of patients is a matter involving no small responsibility. The annexed case proves as much. J. P. was admitted at Northwoods in 1859. The case was one of paroxysmal mania, the then present one being the third attack—the intervals on the two former occasions being fourteen and four-and-a-half years. The disorder was, I learnt, each time indicated by the presence of delusions, under the pressure of which he suspected those about him of designs inimical to himself; such delusions being followed by a disposition of violence, when he showed both a "suicidal and homicidal disposition." Such were the insane antecedents of my patient. On admission, however, he appeared simply agitated, but even this agitation proved but temporary. J.P. was under my care some four months; and during the whole of that time he was, to all appearance, rather well than otherwise. He was at no time treated as a patient,

but after a few weeks joined daily my family circle. He rode out with me, accompanied one of my sons on shooting excursions, and went hither and thither as he pleased. In fact, we stood, in relation to each other, rather as old friends than anything else. Time went on, and I felt at length that I could detain J. P. no longer—that he was no fit and proper inmate for an asylum; I wrote to this effect to his wife. Now it was I was made to understand that, having regard to past experience, his nearest relatives wished to be relieved of him. However, after much delay, and in spite of the opposition offered to me—on insisting that an attendant must be found for J. P., even though he should become (which he did) a boarder in the house of a medical man, and on advising at the same time, that, having regard to certain facts in the history of his case (facts “which were kept from my own knowledge” till they could be kept no longer), razors and suchlike should be carefully and persistently kept from him—J. P. was formally and legally discharged as “cured.” Yet further to prepare for a relapse, or accidents, I entrusted to him, having confidence in his honour and very fair promises, a letter of introduction to the medical man, with whom he took up his residence, in which I detailed all necessary facts, leaving, as I thought, nothing undone in the matter. On the twentieth day after leaving Northwoods, he (J. P.) killed with a razor one of the female servants in the household of which he had become a member. On this the fourth attack no premonitory symptoms appeared—no delusions were manifest. Though it was given on evidence that J. P. was, to all appearance, quite well within a few hours of the sad and fatal casualty, yet was the whole of the blame sought to be attached to it, visited on myself. The responsibility was shirked by all parties who had to do with J. P.—by the relatives and near friends, who resisted the employment of an attendant, and who, moreover, supplied J. P. with his razors; by the Commissioners, who, *after the murder of the poor girl*, raised a strong objection to the manner and circumstances of J. P.’s discharge; and by the Visitors, who declined to move in the case in any way, either before or after his discharge from Northwoods, though they failed not to give expression to very unqualified terms of disapproval after the sad event named.

It would seem that either one of two conditions represented the abnormal mental being of J. P. He may have concealed the insanity which afflicted him, resisted, by a strong effort of the will, the exposure of his delusions, and controlled for a given time the superadded impulse to violence, or the existence of his homicidal promptings; for the insane homicide, like him, suicidally inclined, does not “*wear his heart upon his sleeve for claws to pick at.*” It is indeed surprising, as Dr. Maudsley

affirms, "*how sane a person may appear who all the while has a greater derangement than was ever suspected, until something happens to elicit the evidence of it.*" *

If such were not true of J. P., then the killing of the young woman was due to a paroxysm of transitory mania, or—what is much the same thing—to an uncontrollable impulse to violence, the effect probably, or accompaniment, of long-standing though *latent* disease; the paroxysmal impulse holding much the same relation to the brain, that an epileptic fit does to the central nervous system, or an attack of angina to the heart.

It may be stated here that J. P. was acquitted, at his trial, on the ground of insanity. He became a patient of the late Sir C. Hood's, at Bethlehem Hospital, who, speaking of his case, after an observation of several months, said that, "from that time to the present, although he had watched him with no ordinary care, he did not know that he could attach any particular symptom of insanity to him;" and that, "supposing he was a private patient in my asylum, and the Commissioners in Lunacy asked me why I detained him, I do not know that I could give any definite reason for it."

I doubt not the case of J. P., as here recorded, is well calculated to put alienist physicians on their guard, and therefore it is I have narrated it. It is hoped, nevertheless, that the details given will not lead to delays in the discharge of recovered patients. The question, "*To be or not to be,*" cannot at all times be hastily disposed of, by even the best informed and most experienced.

In concluding these *Reminiscences of Lunacy Practice*, I may express a hope that the *expectant* treatment of disease, now so largely recognised and adopted in general practice, may not take a like hold on the mind of the alienist physician. It has been urged that much of the medical treatment of insanity is little better than useless, and further, that the use of *sedatives* does but encumber the cell-structure of the brain with a restraining influence which is scarcely more tolerable or remedial than the wretched mechanical contrivances of the olden time, devised to restrain the morbid muscular movements of the frenzied. But it is to the zealous and wise adaptation, day by day, of the various remedial means—hygienic, moral, and medical—to individual cases of lunacy we must look for the best results—for the largest amount of relief to our suffering patients, and the highest number of cures among those so terribly afflicted—as all insane persons must ever be held to be.

* See his "*Responsibility in Mental Disease,*" pp. 190 to 193.

ART. VI.—DISEASES OF THE NERVOUS SYSTEM.

BY R. BOYD, M.D. EDIN., F.R.C.P. LONDON (Late President Medico-Psychological Association).

ON this important subject I have attempted to place on record, in a more connected form, facts and observations made during many years, and published in my statistical and other reports of the St. Marylebone Infirmary and Somerset County Asylum. In the St. Marylebone Infirmary ample opportunities were afforded for observations, particularly in reference to the comparative state of the organs and tissues after death, the diseases of both sexes, and of all ages. The facts were carefully methodised, for a term of three years, from notes taken at the time, and included 14,544 cases; of these 8,359 were attended at their own homes, being too ill or unable to attend at the infirmary as out-patients, 1,080 of them were admitted to infirmary, fever and other hospitals, and 6,185 were in-patients, treated in the infirmary.

These cases were arranged in separate tables to show the influence of age, of sex, and of season upon disease as occurring amongst the poor of this section of the metropolis. The results of the various diseases in each sex, at four periods of life in each quarter of the year, were contained in the tables.

The class of out-patients attended at their own homes was frequently that of persons affected with some acute disease, which for a time kept them from their usual employment. Unwilling to be separated from their families, they preferred this mode of medical relief to being admitted to the infirmary, under the hope (which was often realised) of shortly resuming their daily labour. The number of these cases admitted to the infirmary was shown in the tables.

Two-thirds of the patients admitted to the infirmary were from the workhouse. These included a great number of children from the nursery, infant and boys' and girls' schools, together with old cases of disease from the chronic wards, suffering from accession of symptoms or renewed attack of their disease.

The medical staff attached to the infirmary consisted of three physicians, two surgeons, a resident physician and house-surgeon, two assistant surgeons, who prescribed for the out-patients, and attended at their own homes those unable to come to the infirmary; also three dispensers, who compounded the drugs for all classes of the sick. At that time the attendance

at the infirmary by students was recognised by the various corporations, the same as at a medical hospital.

The out-patients were divided into three classes—those able to attend for advice at the infirmary; those unable to attend, who were visited at their own houses; the third class consisted of the sick inmates of the workhouse, who were not so ill as to be admitted to the infirmary, their diseases being, for the most part, mild, chronic, or incurable. The average weekly number during seven years was, of those who attended for advice at the infirmary, 130; visited at home, 115; and in the workhouse, 90. In-door patients treated in the infirmary, 218.

The number of out-patients visited at their own homes during one year was upwards of 3,000. Of this number 304 were admitted into the infirmary, leaving 2,700 cases; 244 of these were mild cases, after parturition, leaving 2,456 of the more serious and acute forms of disease. The deaths were 175, over 7 per cent. among this class of patients. The deaths in the infirmary for the same year had been 15 per cent. Among the 304 above-mentioned admissions to the infirmary 87 died; adding them to the out-patients visited at home, the mortality among the latter would be increased to $9\frac{1}{2}$, and that in the infirmary reduced to about 13 per cent., showing a difference of $3\frac{1}{2}$ per cent.

A death rarely occurred among the “out-patients attending at the infirmary.” Should their disease assume a serious aspect they were at once placed on the list of those visited at home or admitted to the infirmary.

There were upwards of 350 cases in the chronic wards in the workhouse, all more or less diseased, affected with asthma, disease of the heart, of the brain, &c., and many of them were advanced in life. The mortality of this class was about 70 in the year.

The medical expenditure averaged in seven years, for drugs and instruments nearly £600, and wine and spirits £200 annually. The average cost of workhouse and out-patients for these items was half that of infirmary patients.

The population of the parish, according to the census of 1841, was 139,454. The average number of persons receiving parochial relief during that year was 5,679; of this number 4,050 received out-door relief, 1,353 were inmates of the workhouse, and 276 inmates of the infirmary—total, 1,629. The number of sick visited at their homes during that year was above the average, amounting to 3,156. Average daily number receiving medical relief was—patients in the infirmary, 230; patients visited at home, 136; prescribed for at the infirmary, 163; workhouse patients, 102—total, 631, being 1 in 220 of the population, and above 12 per cent. of the paupers.

TABLE OF 14,511 PATIENTS TREATED AT THEIR OWN HOMES AND IN THE ST. MARYLEBONE INFIRMARY.

Diseases	Where treated	Winter Quarter		Spring Quarter		Summer Quarter		Autumn Quarter		Age—Years				Results			No of			Proportion of Deaths to Cases treated
		Males	Fem.	Males	Fem.	Males	Fem.	Males	Fem.	Under 7	7 to 20	20 to 45	45 and upwards	Cured	Relieved or Incurable	Dead	Males	Fem.	Cases treated	
Nervous system	Home	60	114	51	100	52	92	55	100	100	119	252	162	287	89	70	218	415	446	1 in 6.4
	Infirmary	78	135	91	112	68	121	96	113	28	92	398	326	336	353	155	333	511	814	1 in 5.4
Respiratory organs	Home	335	469	239	303	134	131	214	295	481	230	775	631	1,193	408	236	922	1,201	1,837	1 in 7.7
	Infirmary	196	216	127	130	101	103	156	188	195	135	424	463	400	324	493	580	637	1,217	1 in 2.5
Vascular system, heart, &c.	Home	51	104	58	101	45	110	59	107	52	108	285	190	287	178	67	213	422	532	1 in 8
	Infirmary	52	66	35	46	35	52	40	59	68	79	97	141	107	136	142	162	223	385	1 in 2.7
Genito-urinary organs	Home	23	67	28	48	22	68	29	60	11	90	207	34	230	61	5	102	243	296	1 in 47
	Infirmary	20	128	23	126	23	94	22	120	4	176	317	59	481	48	24	88	468	556	1 in 22.8
Digestive organs	Home	94	115	67	131	96	185	113	178	191	121	464	233	805	89	36	370	639	930	1 in 25
	Infirmary	40	61	40	79	80	89	44	71	79	77	188	160	387	48	69	204	300	504	1 in 73
Locomotive organs and cellular tissue	Home	238	223	196	197	152	147	173	222	116	238	623	541	1,212	103	16	759	789	1,331	1 in 73
	Infirmary	210	246	168	218	200	201	256	273	364	635	398	435	1,531	218	83	864	968	1,832	1 in 22
Fevers	Home	220	318	193	290	232	291	226	296	845	428	562	231	1,609	67	131	871	1,195	1,807	1 in 13.8
	Infirmary	108	117	105	134	57	92	85	149	211	233	247	156	712	55	80	355	492	847	1 in 10.5
Totals		1,755	2,409	1,421	2,075	1,297	1,779	1,568	2,210	2,781	2,761	5,237	3,765	9,580	2,977	1,607	6,011	8,403	13,444	

1,180 of these 'Home' cases were removed to the Infirmary, Small-Pox, Fever Hospitals, &c.

In the table, which is a summary of the statistical tables, published for three years, of the diseases of the out-door poor visited at their homes and those admitted to the infirmary, the diseases of the two classes in separate lines are arranged under seven heads, distinguishing the sexes, numbers in each quarter (winter, spring, summer, and autumn), at four periods of life; the results are also shown and the mortality in cases stated.

The total numbers in the two classes of each sex, were:

From diseases of the nervous system	551 males	926 females.
" " respiratory organs	1,502	" 1,838
" " vascular system	375	" 545
" " digestive organs	574	" 939
" " genito-urinary do.	190	" 711
" " locomotive organs		
& cellular tissue	1,623	" 1,757
" " eruptive and other		
fevers	1,226	" 1,687
Total		6,041
		" 8,503

Attention was drawn to some singular facts that presented themselves on looking at the different classes of diseases. It was observed that the females far outnumbered the males, and that the mortality among the females was lower. The preponderance in females was 1·8 per cent. in diseases of the nervous system, hysteria having been exclusively confined to them. The diseases of the digestive organs were 1·3 per cent., and the genito-urinary 4·9 per cent. more in females than in males. This disproportion depended mainly on the more frequent occurrence of inflammatory affections of those organs in the female than the male. The diseases of the vascular system fell more heavily on the females than the males, being 1·3 per cent. more in the former than in the latter. To some extent this was owing to derangement in menstruation; and so far as concerns the heart, the preponderance was owing to affections of that organ being less frequently complicated with disease of the respiratory organs in women than in men. Dropsy was more frequent amongst females.

The diseases of the respiratory organs preponderated in males, being 3·3 per cent. more than in females, the mortality was also higher in males than in females. Diseases of the locomotive organs and cellular tissue, as might be expected, were more frequent in males, being 6·1 per cent. more than in females. Fever seemed to affect both sexes almost indifferently. Effect of season upon particular diseases was very remarkable.

The warmth of summer was most favourable to diseases of the nervous system; there were fewest cases at that season. In the diseases of the respiratory organs the numbers had fallen off two-thirds in those visited at home in the summer compared with the winter months. There was no great difference in diseases of the vascular system; but diseases of the digestive organs were most numerous in summer and autumn. As regards age, it was observed that diseases of the nervous system were most numerous between twenty and forty-five, but the greatest mortality occurred after that period. In the diseases of the respiratory organs the prevalence was greatest after forty-five, but the mortality was enormous in infancy. It was stated: "this fact is so striking, that if returns from other institutions correspond with the present, it will call loudly for the necessity of excluding young children from crowded establishments in large towns." The London parochial schools have since been moved to the country.

Diseases of the vascular system prevailed most in adult and in advanced life, and were most fatal at the latter period. Diseases of the locomotive organs and cellular tissue were distributed pretty equally over the three first periods. Fevers of the eruptive kind were most fatal in female children.

In the original tables the diseases were arranged under upwards of sixty different heads, which have here been summarised under seven heads.

With respect to the diseases of the nervous system there were ten subdivisions, viz. neuralgia, hysteria, delirium tremens, convulsions, epilepsy, insanity, inflammation of the brain and membranes, chronic diseases of these organs, apoplexy, and paralysis.

The organic diseases amounted to 43 and the others to 57 per cent., nearly.

Middle-aged persons were found to be most frequently the subjects of what has been termed the functional diseases, except convulsions, which principally attacked and proved fatal to infants. Convulsions, too, like insanity, appear to have an hereditary tendency; in confirmation of which the following cases occurred in the lying-in ward, viz. the death of two newly-born children, the offspring of epileptic women, and the death of another from the same cause, its mother at the time suffering from puerperal mania. Again, a girl aged 11 years, was brought, in an epileptic fit, to the infirmary; her mother stating that two of her four children had died from convulsions, and that she herself was subject to epilepsy. These cases, which all came under notice within a short period, would seem to confirm the opinion that there is a connection and hereditary tendency between convulsions, epilepsy, and insanity.

The connection between symptoms and organic lesions in cerebral diseases has ever been one of the utmost difficulty and obscurity. The severest symptoms have occurred without commensurate, or, indeed, any structural change being discovered; and, on the other hand, extensive disease has been found without any or but slight symptoms.

As in almost all the cases I have recorded the state of each of the organs, if different from health, as well as the weight and the relations of each in various diseases and in both sexes, are compared, it appears necessary here to give the AVERAGE WEIGHTS, which, as taken from the cases examined in the Somerset County Asylum, showed the following results:—

Age	Sex	Body		Measurement of head			Cerebral Organs					Spinal Cord	Thoracic Organs			Abdominal Organs															
							Cerebrum																								
		Weight	Height	Circumference	Antero-posterior	Transverse	Right Hemisphere	Left Hemisphere	Cerebellum	Pons and Medulla	Encephalon		Right Lung	Left Lung	Heart	Stomach	Liver	Spleen	Pancreas	Right Kidney	Left Kidney	Renal Capsules	Uterus								
20 to 40 years	M.	97	4	5	6	22.1	13.2	13.2	in.	in.	oz.	20.3	20.4	5.2	1	47.1	1.1	oz.	23	9.3	oz.	5.6	52.7	5.2	3.5	4.3	5	oz.	—	oz.	1.5
	F.	77	12	5	3	21.2	12.8	13	in.	in.	oz.	18.9	19.1	4.8	1	43.8	1	oz.	18	7.6	oz.	5	44.5	5.2	3	4.1	4.3	7	oz.	1.5	
40 to 60	M.	109	0	5	7	22.2	13	13.3	in.	in.	oz.	19.9	20.2	5.4	1	46.6	1.1	oz.	21	10.9	oz.	6	51	5	3.6	4.5	5.4	9	oz.	—	oz.
	F.	79	12	5	2	21.4	12.9	12.7	in.	in.	oz.	18.3	18.5	4.7	1	43.2	.9	oz.	16	8.7	oz.	5.2	44	4.3	3	4.2	4.2	7	oz.	1.7	oz.
Upwards of 60	M.	107	9	5	6	22.3	13.3	13.2	in.	in.	oz.	19.96	19.98	5.1	1.1	46.1	1	oz.	20	12	oz.	5.4	45	3.4	3.1	4.8	4.6	8	oz.	—	oz.
	F.	88	7	5	2	21.3	12.8	13	in.	in.	oz.	17.9	18.12	4.8	.95	41.6	.9	oz.	15	9	oz.	4.9	40	3.6	2.8	3.6	3.5	8	oz.	1.5	oz.

EFFECTS OF AGE UPON THE WEIGHT OF THE ORGANS.

From a comparison of the organs in the first and third periods of life, a diminution of their weight in the latter is evident. This would seem in great measure to be dependent on age, as it has almost invariably been found greatest in persons farthest advanced in life. In the third period the diminution of the weight of the encephalon was one ounce in the male and one and a half ounce in the female; the decrease was confined to the cerebrum in the male, but in the female there was a slight decrease in the pons and medulla. The heart was an exception, as in males of the third period it was two and three quarters and in females nearly two and a half ounces heavier, which may be owing to the great mortality of pulmonary diseases, which are usually combined with enlarged heart.

Weights of the organs in the male and female compared, show a general diminution of their weight in the latter; in the encephalon the difference is 3·3 in the first and 4·5 ounces in the last period, chiefly in the cerebral hemispheres, the difference being 2 ounces in the right and 1·8 in the left. The left cerebral hemisphere was about one-eighth in the males and one-fourth of an ounce in the females heavier than the right; the cerebellum nearly half an ounce heavier in males than in females; the pons and medulla alike in both sexes at the three periods. The difference in the weight of the heart increased with age, being but one and three quarters in the first period and three ounces less at the third period in the female than in the male.

The organic diseases of the brain arranged under—1st, inflammatory affections of the membranes of the brain and of the spinal marrow; 2nd, softening of the brain, which is supposed to be in most cases, but not always, a result of inflammation; 3rd, tuberculous, cancerous, and other tumours of the brain; 4th, apoplexy and paralysis. These diseases have been found most frequent in infancy and in advanced age, and formed about three-fourths of the fatal cases of disease of the brain in the St. Marylebone Infirmary. The functional diseases include the remaining fourth. These are convulsions, epilepsy, and insanity, in contradistinction to the organic diseases, because it frequently happens that no structural change whatever is observable in the cerebro-spinal system, or any appreciable difference from what is seen in the brains and spinal cords of persons free from those disorders.

The term spasm was applied by Dr. Cullen to a state of

muscular contraction more violent than is usual in health. Where the contraction is succeeded by relaxation, and immediately repeated without the concurrence of the will or from natural causes, he applies the term *convulsions*. Dr. Copland, in his Dictionary, has given a fuller definition to distinguish convulsions from allied and specific diseases, as tetanus &c. Andral's definition is similar to Copland's, with this addition, that there is not loss of consciousness. When there is loss of consciousness the disease is termed eclampsia, always without foaming at the mouth, by which eclampsia is distinguished from epilepsy.

Animals hanged and bled to death die convulsed. A state of general plethora, or an opposite state, anæmia, are both favourable to convulsions. Hippocrates asserted that convulsions were brought on either from repletion or inanition. Galen also considered these two the chief causes, but added a third, irritation, which is by some referred to repletion, and for this state blisters were considered the fitting remedy. Hoffman says the membranes of the spinal cord are affected in convulsions. Morgani (letter x) treats of convulsions, and, amongst other causes, mentions disease of the kidneys. Boerhave mentions that in cases of great debility spasms and convulsions are wont to precede death, and in animals from fatal hæmorrhage and from overdose of some vegetable poisons. Copland mentions an epidemic of convulsions that occurred in the West of Scotland in 1742, from hearing addresses directed to the imagination and passions of their hearers by the followers of Whitfield. Another epidemic in Cornwall, in 1813-14, from similar causes, is described by Mr. Cornish. Dr. Babington, in his admirable preface to his translation of Hecker's *History of the Epidemics of the Middle Ages*, well observes, "that the mind and the body reciprocally and mysteriously affect each other, and the maladies which are the subject of these pages are so intimately connected with the disordered state of both that it is often difficult to determine on which they more essentially depend, or which they more seriously influence." Joy will affect the circulation, grief the digestion; anger will heat the frame as perniciously as ardent spirits, and fear will chill it as certainly as ice. Specific diseases, too, are produced through the agency of mental impressions. The dances of St. John and St. Vitus, as they formerly spread from city to city, gave rise to the same deviations from bodily health in all the individuals they attacked. The dancing mania called tarantism was the same disease, whether medically or morally

considered, all over Italy; it was, at its greatest height in the seventeenth century, caused by the bite of a venomous spider. Nothing but music afforded relief. This disease continued for nearly four hundred years. A similar disease in Abyssinia is described as seen in 1819.* In France the “convulsionnaires” appeared in 1737, and continued to the revolution, 1790.

Nervous disorders in an epidemic form exist at the present time both in Europe and America. Their appearance in *single cases* leads to the belief that they also proceed from physical causes, which is supported in experiments of modern physiologists.

We also find that convulsions attend almost every variety of *organic* disease of the brain. In the writings of Bonetus cases are mentioned where there was fœtid discharge from the nostrils; another where there was serum in the cerebrum and spinal canal; another where serum was found in the cerebral ventricles; another from fracture of the skull; another from effusion of urine, &c. I have observed convulsions in adults attend cancerous tumours in the brain, also granular disease of the kidneys, enlarged kidneys and heart, dropsy, and enlargement of the brain.

A case of this nature occurred in the St. Marylebone Infirmary (No. 784), a coachman, aged 50, admitted twelve days before death with hemiplegia of the right side of six months' duration. After admission he had several convulsive fits; twitchings of the muscles of the face; the face was flushed. He was dull in comprehending and slow in answering questions. He became suddenly worse, and for the last five days of his life was unable to speak. The structure of the brain was softened and adherent to the dura mater, which was thickened; attached to it were several scirrhus tumours of various sizes, from a pin's head to a large pea.

Another case (No. 839) of a man, aged 36, under treatment in the infirmary for seven weeks: convulsions, combined with enlarged heart, kidneys, and liver, and general dropsy. The convulsions came on seven hours previous to death. *Head*: Some blood effused in the scalp; brain large and pale; convolutions flattened; pia mater readily peeled off; no fluid in the ventricles; weight of the encephalon 52 oz. *Chest*: About 1 pint of fluid in the pleura; general bronchitis; œdema of lower lobe; right lung 41½ oz., left lung 26½ oz.; heart much enlarged and mitral valves thickened, weight 18½ oz. *Abdomen*: Some fluid in peritoneum; liver large, 82 oz.; kidneys enlarged, 15½ oz.; body 153 lbs.; length 5 ft. 10 in. Case in a

* Life of Nath. Pearce.

female aged 62 (No. 842): convulsions, combined with wasted and granular kidneys. *Head*: Brain large, $48\frac{1}{2}$ oz. *Chest*: Lungs natural, heart large, $11\frac{1}{2}$ oz. *Abdomen*: Mucous follicles of stomach unusually large, 6 oz.; kidneys wasted, granular, right $3\frac{1}{2}$ oz., left only $1\frac{1}{2}$ oz.; body 73 lbs. Another case (No. 843) in a female aged 69: convulsions, with pain in the loins and suppression of urine. *Head*: Brain $38\frac{1}{2}$ oz., soft. *Chest*: Lungs natural; heart $10\frac{1}{2}$ oz. *Abdomen*: Liver small, 30 oz.; kidneys dark coloured and soft.

Children born with large heads, strumous habits, fine white skin, the muscular system little developed, and subject to diarrhœa, are prone to convulsions. Convulsions have also succeeded an eruption on the head, and often occur during dentition. Valsalva observed that the external figure of the cerebrum, which follows the figure of the skull, when it is not natural may indicate something entirely foreign to the intentions of nature which renders it prone to disease.

Convulsions may terminate in some of the diseases of the brain, or in death, and death may occur either by the brain, the lungs, or heart, as shown in the foregoing cases. Andral found, in fatal cases of convulsions, frequently lesions of the brain, varying in extent from simple hyperæmia even to extensive softenings; but in many instances no lesion was discovered, and such cases he sets down to irritation.

The symptoms of convulsions may occur during the course of any other disease or in a state of perfect health and leave not a trace behind. They consist of various movements—bending of fingers and toes, shaking of the head. Strong emotions in infancy, as fright, anger, are predisposing causes. The children of epileptic persons often die in convulsions, and the records of lunatic asylums show that those of their children who survive often become epileptics and insane. In six infants who died from convulsions, four males and two females, whom I examined within a short period, two males and two females were from one to four weeks old, and two males were eight and eleven months respectively. In one male infant the convulsions lasted five days, in the other male the convulsions were of shorter duration. In one female the convulsions continued nearly from birth, and in the other female for ten days. *Head*: In three males and one female the cerebral vessels were congested with blood; in one male the brain was unusually large; in one female the brain was in a normal state. *Chest*: The lungs were congested with blood or hepatised in all the six infants; in one male the “foramen ovale” of the heart and the “ductus arteriosus” were open. *Abdomen*: In one male the viscera were unusually pale; in one male the mesenteric glands were enlarged.

CASE OF SCROFULA AND WAXY LIVER, TERMINATING IN CONVULSIONS.

Michael Q., aged 18, admitted October 17, 1846, from the Margate Infirmary, where he had been for caries of the spine, backward curvature, and a scrofulous abscess in the loins. Coming back from Margate in the steamer he had a fit of convulsions, which recurred frequently after his return; he died January 12, 1847. During the last two days he was delirious. *Head*: Brain unusually large, pale, convolutions flattened, right cerebral hemisphere, $22\frac{1}{4}$; left, 23; cerebellum, $5\frac{1}{4}$; pons and medulla, 1; encephalon, $51\frac{1}{2}$. The right optic thalamus weighed in this case 5iijss, the left 5iijss ̄i; the right corpus striatum, $\frac{3}{4}$ oz. 5iss, left $\frac{3}{4}$ oz. 5i; the corpora quadrigemina, 5iss. *Chest*: Right lung, $7\frac{3}{4}$; left, 7; heart small, $4\frac{3}{4}$ oz. There were pleuritic adhesions at the apices of lungs, and a few tubercles and small anfractuons ulcerations in the right, the left lung pale, structure natural; the heart filled with pale fibrine. *Abdomen*: The liver enormously enlarged, which was evident during life, waxy, weight, $81\frac{3}{4}$; stomach, $2\frac{3}{4}$; spleen, $10\frac{3}{4}$; pancreas, 2; kidneys large; right, 5; left, 6; renal capsules, $\frac{1}{2}$; mucous membrane of intestines natural; caries of ischium. Mr. Gulliver found the portion of liver the colour of crude bees-wax, and stiff or tenuous in texture; from his examination by the microscope these characters appeared to be owing to an unusual accumulation in the liver of viscid biliary matter, with a large proportion of mucus. It did not contain more fatty matter than in the healthy state.

Convulsive motions of the eyes, which are sometimes turned upwards and at others inwards or outwards, contortions of the face, contractions of abdominal and thoracic muscles, and spasm of the diaphragm producing hiccup; the tongue is sometimes protruded at others retracted; the involuntary muscles, as the heart, are seized with palpitation, and the peristaltic actions increased in the intestines. Sometimes there is vomiting and involuntary dejections.

The convulsions are either general, which is rare, or partial, which is common. Irregular muscular motions are not the only symptoms; there is also incomplete and sometimes complete loss of consciousness.

The muscles after violent convulsions often become painful, ecchymosis is sometimes produced, or even dislocations, rupture of tendons, and even sometimes fractures. The duration is

variable. There is a tendency to recurrence. The recurrence of convulsions has been known to have ceased after vaccination.

Convulsive affections are sometimes the effects of injury. Solly, in his work on the human brain, page 561, gives a most interesting case of a man, aged 33, who received a compound fracture of the skull. For thirteen days after admission to St. Thomas' Hospital he had no bad symptoms. Pain and throbbing in the head came on, followed, after two days' duration, by a fit and hemiplegia in the left side. Fits next day became frequent, loss of consciousness followed, and death seventeen days after the accident. The brain corresponding to the fracture was discoloured and disorganised downwards into the lateral ventricle, and the arachnoid covered with pus on the injured hemisphere only.

As to the *treatment*, no uniform plan can be adopted; it must entirely be regulated and guided by the causes.

The diet and regimen ought to be carefully attended to. In infants and young children crying should be prevented, if possible, as it often brings back the seizures. When the bowels have been sufficiently evacuated, the "*hydrargyrum cum creta*" is recommended; blood-letting and evacuants in cases depending on plethora, and the very opposite treatment in cases depending on anæmia. Narcotics are sometimes indicated; also ammonia, ether, tincture of castor, or tincture of sumbul, quinine, nitrate of bismuth, and oxide of zinc are sometimes given. Purgatives are sometimes required, and oil of turpentine, if worms are supposed to exist. Warm or vapour baths, or fomentations in case of a suppressed eruption, may be found beneficial. Blisters and sinapisms, as counter-irritants, are often applicable.

ART. VII.—MORBID APPETITES OF THE INSANE.

BY W. A. F. BROWNE, ESQ.,

Psychological Consultant, Crichton Institution, Dumfries; recently Medical Commissioner in Lunacy, Scotland.

“She can cranch

A sack of small coal, eat your lime and hair,
Soap, ashes, loam, and has a dainty spice
Of the green sickness.”—*Ben Jonson*.

ON visiting the wards of an asylum there may be encountered individuals of both sexes and of every station, of pleasing aspect, respectful or refined address, and of coherent, even intelligent conversation. If the pursuits and amusements of such a community be witnessed, they may present the same animation and decorum, the same enjoyment and self-control, which characterise similar meetings in rational and respectable society. These scenes are mere simulacra, semblances of sanity. They are presented to the critical eye as an advertisement of success, as the triumphs of common sense and common humanity in rehabilitating the native ugliness of disgusting desires or savage passions, in rebuilding the ruined temple of the soul, or as appropriate appeals to the sympathies and convictions of the observer. But they form merely the outer wall of a whited sepulchre. There is, within and below, the loathsomeness of decay, rottenness, and degeneracy. There will be found in other strata of “the relics of another and an outer world” of past health and happiness, degradations, perversions, and brutish tendencies so gross and grovelling as to extort the enquiry, can all this be consistent with the past dignity and nobility, the future glory and immortality of that being who is a little lower than the angels? The attractive colours of the picture are not, however, a fable or a falsity; they constitute the genuine and legitimate fruits of improved treatment, founded upon science and a partial knowledge of the requirements and regulation of the human mind; while the feebleness, the fatuity, and the foulness which lurk behind are as genuine fruits of this partial knowledge, and of the ignorance and incompetency which are confessed, but not yet overcome, and which the splendid enlightenment already spreading around us serves to reveal, but not to remove. Dark and gloomy although such destinies of our fellow-men may be, they are not inscrutable. Many solutions have at least been offered of this fallen estate. It has been attributed to the direct vengeance of Deity, as a punishment for sins personal or ancestral; it has

been identified with Satanic possession; it has been traced back to our brute nature, and paraded as a proof of our descent and evolution from some less-gifted animal. We conceive that another explanation less remote and recondite, and more in harmony with the history of each individual, is accessible, and that a brief narrative of some even of the most hideous forms in which alienation may present itself may develop this, and may at the same time serve to warn the sanguine that comparatively little has been accomplished in the amelioration of mental disease; that they should not be misled by the fractional good which has been done, nor withdrawn from the contemplation of the enormous amount that remains undone, as a stimulus and reward to coming Psychologists.

PHYTOPHAGES.

Structural arrangements and the astute vigilance of trained attendants have suppressed much of the violence, the vagaries, and absurdities of the chronic insane, but they have failed, and must, perhaps, always fail, in frustrating the grotesque devices by which perverted appetites and aptitudes are manifested or gratified since the abandonment of a mask or a chain. Many patients display a taste and a talent for deception and evasion, and derive pleasure from eluding or defeating the provisions instituted for the purpose of making them human and happy. Many years ago we had as a patient an officer in the navy who was partially demented and incoherent, but who retained the language and many of the habits of his former condition. The contraction of his fingers indicated that he had suffered from hemiplegia, but his firm and rounded form, his blooming and smiling features, showed that he was robust and well-nourished. He often wrote with chalk or some substitute on the pavement, and while tracing his gigantic letters he assumed the quadrupedal position which might have betrayed to certain theorists a relic of his origin from animals of a lower grade. He had another peculiarity which seemed to corroborate this fanciful idea. His lips were repeatedly noticed to be green, and particles of grass suggested the suspicion that he chewed and perhaps swallowed the herbage in the airing ground. He was watched and detected in devouring considerable quantities of the grass and in making what might have served as a meal for one of the herbivora. This man had abundance of plain food, lacked not tobacco, and indulged in this practice in order to administer, it was at the time conjectured, to a depraved taste, or to allay the cravings of morbid hunger. We have since met with many instances of similar depravation, where

the leaves of trees, herbs and vegetables of all kinds, seeds, roots, unripe fruits were taken at random and in large quantities. Even in their Report, 1875, the Board of Lunacy, Scotland, has issued a circular warning of the evil and fatal effects arising from access to yew leaves and berries. It does not seem necessary to seek an explanation for such indulgence in the origin of species or in the reappearance of an instinct, extinct in the individual, but existing in his progenitors and in their unevolved unhumanised ascendants. We are acquainted with the history of J. Gordon, the mother of a microcephalic idiot boy, who throughout life displayed an insurmountable repugnance to animal food. A modification of this perversion is met with in hypochondriacs, who, it is well known, cherish their maladies, have a predilection for infirmity and invalidism, recoil from robust health, are engrossed with medication, and who, though rejecting natural and attractive aliments, acquire a positive pleasure in subsisting upon drugs. Abstinence is certainly a frequent symptom; but bulimia, or inordinate appetite, is likewise met with in melancholics, extending to inedible, disgusting, and noxious matters, and may depend upon an advanced stage of that irritation which leads primarily to the rejection of food in other individuals. This uneasiness or craving, which sometimes amounts to torture in the region of the stomach, may be traced to exalted or morbid sensibility of the nerve, and which may suggest the desire for food without any consideration of its esculent or digestible qualities. Gratification appeases the inordinate appetite temporarily, and extinguishes the local pain; but the recurrence of the inclination to eat takes place much earlier than can arise from the wants of the system, or from a healthy state of the stomach. In such cases, where patients do not sleep, food is sometimes supplied during the night, which appears to remove the cause of their restlessness, and is followed by sound refreshing sleep.

The earliest and most celebrated illustration of morbid vegetable-eating is that to be found in the Book of Daniel. As this narrative has been discussed by the present writer in a theological work under the shadow and sanction of the venerable name of Dr. Pusey, it may be here introduced as connected with this enquiry. It is stated that Nebuchadnezzar "was driven from men, and did eat grass as oxen, and his body was wet with the dew of heaven, till his hairs were grown like eagles' feathers and his nails like birds' claws." It is now conceded that the madness thus delineated was allied to a rare sort of disease called Lycanthropy, or one form of it of which our earliest notice is in a Greek medical writer of the 4th century after our Lord, in which the sufferer

retains his consciousness in other respects, but imagines himself to be changed into some animal, and acts, up to a certain point, in conformity with that persuasion. Those who imagined themselves changed into wolves howled like wolves, and, there is reason to believe, accused themselves falsely of bloodshed. Others imitated the cries of dogs; it is said that others thought themselves nightingales, lions, cats, or cocks, and these crowed like a cock. We attended a lady who conceived herself transmuted into a cow, but did not frequent the "pastures sweet." In many classes of the insane the eating garbage, excrement, even grass, is a symptom both of general debasement and of a perverted craving for unsuitable and innutritious diet. If Nebuchadnezzar's punishment, then, be regarded as alienation, involving the greatest conceivable amount of degradation, the "eating grass as oxen," the expulsion from the society of his fellow-men, and the exposure to the elements may be viewed as most graphic features of his disease, and of the cruel treatment to which, in those and in much more recent days, such an affection subjected the sufferer.

There is a traditionary belief that a melancholic, suspecting his meals to be poisoned or adulterated, was sustained for a long period upon the contents of cocoa-nuts. We have had several patients who took no support but that of bread; one of whom exercised this self-denial in order that his fellow-sufferers might benefit by his abstinence, and greatly impaired his strength by such abstinence, as well as by secluding himself in a closet traversed by hot-water pipes, so that a larger amount of warmth, according to his estimate, might reach and cheer his companions. This was a delusion, or an erroneous judgment; but if we recollect that millions of our fellow-creatures in India are, at this moment, granivorous, guided partly by superstition and partly by the products of the country and climate; that large, but perhaps not so large, numbers in other parts of the world are frugivorous; that we ourselves, in a certain stage of our life-progress, have depended almost entirely upon cereals; that Creed, for ages, limited ascetics to farinaceous food; that a misinterpretation of physiology has converted thousands into enthusiastic but rigid vegetarians; we cannot justifiably regard phytophagism as more than a deviation from modern customs, as a morbid tendency, as the exaltation of a desire for a particular kind of food, which has been over-laid or obscured by usage, luxury, or special circumstances, but which reappears when these superinduced or superincumbent veils or disguises have been torn off by disease, and the rudimentary strata of our instincts and propensities laid bare. The Gymnosophists were both nudifiers and vegetarians.

LITHOPHAGES.

While paying a professional visit in years when bleeding was still employed as a remedy, an hysterical woman rifled my pocket, extracted from it a small morocco case for two lancets, and, notwithstanding the exertions of those around, swallowed it. About the same time, when manacles had come under the care of science, and the iron which was supposed to enter into the soul, had given place to the reign of leather, stuffed gloves, and buttoned dresses, a lady, whose gown was secured at the back by small padlocks, succeeded in tearing off one of these and passing it down her throat. In what manner these objects entered the stomach or what became of them was never ascertained; but certain it is that no injury or disturbance followed their entrance into the system. The tolerance of the organs of digestion has been demonstrated in various other ways and in a more striking manner. The handles of spoons have been cut out from the walls of the abdomen, which had been furtively thrust down the œsophagus by lunatics, and cases have occurred where, after death, spoons, knives, buckles, buttons, coins, and a miscellaneous collection of small articles have been disclosed by dissection.

In the Register of Deaths, March 1852, a startling instance of this kind is recorded. In a private asylum in London there were found in the stomach of a lunatic thirty-one handles of table-spoons, about a dozen of nails, two or three stones, and a button.

It is at first difficult to conceive under what feelings or for what purpose such acts had been resorted to. As none of the metal-eaters appear to have meditated suicide, we are compelled to embrace the supposition that such dangerous experiments were dictated either by delusions of invulnerability or immortality, by boastful pretensions of occult or supernatural powers, or should be numbered among the rash, motiveless, frenzied acts characteristic of sudden impulses during maniacal paroxysms. I have had more than once to contend against the wounds inflicted by portions of window glass thrust into the mouth or œsophagus with the view to destroy life, and upon one occasion was called upon to deal with an excited masturbator, who, either under the pangs of remorse, or instigated by those obscure suggestions which emanate from excited cænesthesis, seized, crunched, and effectually triturated the glass which had fallen from a pair of spectacles, and contrived to swallow a considerable portion of the sharp particles. He survived this accident and ultimately died of phthisis.

Familiar with pronators, grovellers, burrowers, and hidiers, who dallied with dirt and gravel or excavated the ground near

to them, I long suspected that many inedible substances were subjected to mastication; but not until I had an opportunity of being present at the examination of the bodies of individuals who had died in a workhouse during an epidemic of cholera did I form any conception of the extent to which earth-eating was carried by the insane. Of many opened, five bodies contained earth in the intestines. It had not, apparently, undergone any change, but was at some points caked into masses; at others it remained disintegrated or pulpacious. In all these persons the colon was the chief receptacle of this foreign matter, which was present in such enormous quantities, although the precise amount was, unfortunately, neither measured nor weighed, that the enlarged and distended gut had been forced by its contents across and almost down into the pelvis, occupying the position, in fact, formerly supposed to be characteristic of melancholia. Of the history of these cases nothing was known, except that they had long lived in seclusion and died during cholera; but it was surmised that the low diet and depressing surroundings of their situation might have had some influence over the foul and perhaps fatal practice thus disclosed; in fact, that recourse had been had to mother earth because food was insufficient. Either to allay an irresistible impulse, or as a mode of malingering or of suicide, dirt and plaster eating was constantly resorted to by enslaved negroes, and induced the disease or the death which they coveted. There are peoples who supplement their ordinary nourishment by taking insectiferous earth. There are savage tribes who gorge themselves with mould, or balls of mould, in order to distend the stomach, and thus to mitigate the cravings of hunger. There are, again, those who devour an unctuous clay, and expect to derive support from the animal or vegetable oil with which it is saturated, thus proving the omnivorousness of our species, so that what was done by lunatics from necessity is repeated by their brethren in freedom, from choice. It is known that rocks have yielded oils which have been utilised for food and medicine. Romance tells us that pearls have been dissolved in order that royal lips might quaff a draught unparalleled in value, however unpalatable it might be; and I have seen chlorotic and dyspeptic girls, both sane and insane, devour chalk, cinders,* and other disgusting solids, but have met with few examples of stone-swallowing so extraordinary as the following:—J. C., a thin, pale melancholic, was long under my care. She was stealthy in her gait, secretive and cunning in some of her habits, moderate in appetite, and was placed under special observation, as it was feared that she added to the ordinary bill of fare some

* *Cyclopædia of Practical Medicine*, vol. i. p. 378.

less digestible matters. Such apprehensions were, however, long disarmed by the absence of all other symptoms of indisposition than anæmia and attenuation of frame. At length a dose of castor-oil was required, and its operation confirmed the accuracy of the original suspicion. The stools contained, besides healthy coated fæces, a large number of pebbles, evidently obtained while taking exercise in the grounds; but whether all had been swallowed at once, or at several times, there were no grounds for conjecture. During the next twenty-four hours there were collected 158 stones, now upon my writing-desk. The total number weighed nine and three-quarter ounces, the largest reaching to six drachms. They were of all forms, and sometimes presented rough surfaces and sharp edges. Increased care and watchfulness interfered with any further indulgence in this extraordinary modification of erapulence; but the unfortunate patient was removed to another establishment, where, after some years, she became bedridden, and ultimately died of what was supposed to be chronic gastritis. On inspection the stomach was found filled by a rolled dark mass, which is now before me, and which consisted of hair, some portion of which might have been stolen from her mattress, but the largest portion was evidently plucked from her own head. This propensity is sometimes associated with fæcophagism.

SARCOPHAGES.

I would not treat as flesh-eaters such as enjoy cooked joints every day. A large portion of the inhabitants of the world delight in and depend upon animal food; but it is remarkable that, as we approach the primitive or unreclaimed condition, the enjoyment of such a viand seems to be enhanced by the freshness of the muscle, by its half-cooked or raw condition. The North American Indian and his children sit around the fire, immediately after the chase, and luxuriate in a repast upon the yet palpitating carcass and suck the marrow from bones which have been heated as much by vital warmth as on the blazing hearth. It has been asserted that the correct mode of securing an unrivalled beefsteak is to cut a slice from the haunch of a living bullock and to heat it slightly in the sun. It would be absurd to suppose that any such refinements of the gastronomic art actuated the wife who, longing to taste her husband's shoulder, killed him in order to possess herself of the coveted morsel; but it has been well established that under circumstances of hunger, cold, exhaustion and exposure, as well as in pregnancy, the most selfish and sanguinary

propensities are called into activity, overcoming every motive save those of self-preservation and the satisfaction of the dominant appetite. Thus we are told that during the latter stages of the journey of Sir John Richardson and his party the mind became impaired, egoism predominated, and when game could not be procured, men murdered their masters and comrades in order to appease their sufferings, and were then killed in turn to arrest a series of similar tragedies. He says: "I observed that, in proportion as our strength decayed our minds exhibited symptoms of weakness, evinced by a kind of unreasonable pettishness with each other." It is possible that famine or imperfect nourishment may have called forth the longing for flesh in certain cannibal lunatics, the selection of their own muscles or those of companions being determined by the restraints under which they lived, but this cannot be received as the explanation of other cases on record. A chronic maniac, under my own charge, bit off the nose of a sleeping friend, but was prevented from swallowing it; another attempted to devour a part of her own arm; a third picked and plucked off the greater part of the lobes of both ears, apparently enjoying his repast of the shreds and blood, invariably uttering during the process, "the royal blood of peacocks." These patients were well fed and cared for and under constant superintendence. A desire for living flesh is mentioned by Dr. Laycock, on the authority of Dr. Elliotson, "so that some have eaten live kittens and rats;"* and instances have recently come under my own notice where live mice, frogs, beetles, and worms were devoured; but the pressure of want may have tempted an idiot lad, whose case has been stated to me, to eat part of the shoulder of the corpse of his mother, with which he had been locked into a room. In individuals, the disorder of whose mind receives a colouring from criminal impulses, where homicide precedes or proceeds from anthropophagism, the promptings of hunger seem to be connected with the blood-thirst; but ample details upon this revolting division of the subject may be found in an "Essai sur l'anthropophagie, par M. le Dr. Legrande du Saulle," "Annales Medico-Psychologiques," Third Series, t. viii. p. 472, and in an article on "Necrophilism," "Journal of Mental Science," January 1875.

Our concern is with innocent, because insane, carnivorous human beings. We have had patients who subsisted, and for long periods, exclusively upon animal-meat, some of whom delighted in raw or semi-prepared meals; others loathed, or affected to loathe, all farinaceous or vegetable matter, while

* *The Psychological Journal*, vol. iv. p. 31. First Series.

others delighted in the quantity rather than the quality of what was offered. The latter, like Mary Queen of England, whose voracity required an addition of £26 per annum to the Court expenses for meat breakfasts and suppers, were gluttons, but under such restraint as interfered with any estimate of their powers of consumption; yet, when opportunity offered, they were detected in appropriating the portions of three or four of their fellows, so that the range and extent of their limitless and insatiable hunger was but imperfectly ascertained. It was at one time benevolently believed that rice-eaters were in disposition mild, timid, treacherous, and the events of the Indian mutiny in part substantiated this opinion. It was likewise believed that flesh-eaters were daring, barbarous, sanguinary, and savage, and, so far as very narrow experience of the habits of this class among lunatics may justify any conclusion, such propensities were developed in connection with the strictly animal diet. Such persons were generally, although not always, maniacs, and may have acted under the influence of their real or imaginary powers, and of morbid passions rather than of morbid appetites. In Dahomy it is recounted that the wives of the Thunder-God cut slices from the bodies of those killed by lightning and chew them. The cave-men, of whom our naturalists speak, must have been hearthless as well as houseless, and must have used their game of Elk, Bear, &c., raw or merely heated, and I have repeatedly seen inmates of asylums who were utterly regardless of the culinary art, and others who would have dispensed with all cooking. I have just heard of a man who, during his absence from an asylum from which he had escaped, lived upon the raw flesh of fowls and rabbits. In my own practice I examined an imbecile who chewed and swallowed dead or half-dead leeches, although he was understood to have been tempted to partake of this shocking repast by a bribe.

Now, when compared with our own modes of sustenance, and with the habits of decent society, such tastes and indulgences will appear monstrous and unnatural; yet it is highly probable that the choice of animal food is merely the cropping out of a primary instinct, and that the preference of raw flesh may date from the ages when in our woods the noble savage ran, but no earlier; and, if we consider the slow growth of artificial tastes and tendencies, the accumulated impressions which have for these ages trained and transformed human inclinations, no wonder need be felt that the origin of such mental manifestations should be prehistoric, or that they should reappear during cataclysms, whether general or individual, or when man is stripped of all that constitutes him the man of civilisation.

FÆCOPHAGES.

When we read of Lalande carrying in his pocket a box filled with common spiders and caterpillars, one of which he from time to time ate, as other men take comfits or tobacco, we are not entitled to recoil from a statement of the disgusting substances, the putrilage, the filthy abominations which may be swallowed during alienation, as this sketch would be imperfect without such disclosures, although we raise the veil with repugnance. This reluctance should likewise be lessened when we recall the fact that the Samoiedes and Kamtchadales elect putrid fish as an article of diet, or when we find that among the Chinese Tibetians the initiation of pleasure in "still meat"—that is, maggoty meat with a decaying game flavour—is favoured as a means of creating ferocious valour, and that for this purpose they cut meat into thin slices, dry it in the sun, grind it to powder, and then mix it with fresh blood, put it in a cloth, and give it to infants to suck.

There are before me copious notes by a trustworthy physician of the case of a gentleman of large fortune, who lived in a palace, and who, as may be inferred from what follows, was literally lord of all he surveyed. This educated person was deranged, and although he spoke rationally and presided at his own table; yet he lived in a small apartment which no one had been allowed to enter for months. Our medical reporter, penetrating within its hideous recesses, found the floor covered with the remains of the meals served to its master for the last six months, as he would not allow them to be removed. These consisted of game, fish, lobsters, of every kind of aliment or luxury which the resources of an ample estate and establishment could supply. These were passing through every stage of putrefaction, and exhaled a smell of the most disgusting and overpowering kind, but which was declared grateful to the senses of the occupant. This was not all; portions of excrement appeared among the dishes; a soaked and soiled bed, which never was changed, lay in a corner, and urine was preserved as a beverage; nothing, in short, was ever removed from this den with the knowledge or consent of the lunatic. The latter horrible practice was traced to a delusion that the beer, which was taken in large quantities, passed through the body unchanged. In addition to this, five large rooms in this splendid mansion were found to contain, under lock and key, enormous quantities of animal matter, of hares, pheasants, or their skeletons or mummies, one dried roebuck hanging from the post of a magnificent curtained bed; none of these objects having been known to exist, or having, at least, been disturbed by the household.

This gentleman is said to have recovered. It is but compassionate to suppose that, in addition to many delusions known to have existed, there were present perversions or hallucinations of the senses of taste and smell. I have, however, repeatedly met with inmates of asylums who drank their own urine where no such explanation or excuse could be advanced, where the other habits were those of refined gentlefolks or respectable peasants, and where food was taken with relish and propriety. Still more frequent are instances of individuals, not otherwise debased, washing or rubbing the body with this secretion, evidently under the absurd notion that it may act as a restorative unguent on ablution. Within a few days we have visited a gentleman of good position and manners, far-travelled and well-informed, but long an inmate of an asylum. He is generally bedridden, and his skin, linen, &c., are redolent of urinous exhalations; and while he does not eat ordure, he cannot be persuaded to part with it, touches it, fondles it, &c. His most prominent moral feature is a sort of sentimental religiosity, and during a former stage of his malady he hoarded with scrupulous care and anxiety every hair which fell from his long locks, every paring of his nails, conceiving them to be sacred and precious, as parts of his living body, under a morbid misapplication of the doctrine or the emotion as to the relics of the great and the good. Unfortunately, such aberrations and degeneracy descend still lower; we have known lunatics who daubed their persons with ordure, who ate it, who resorted to every contrivance and misrepresentation in order to gratify this obscene lust, and who never seemed to comprehend the degradation to themselves and the outrage to others involved in such acts. Esquirol had a patient who, in besmearing the walls, conceived he was using colour pigments. Superstition presents, under the sanction of the Grand Lama, parallels to these horrors. A partially restored maniac, so plausible in conversation as to have imposed upon his relatives the belief that reason was completely re-established, exemplified the association of revolting peculiarities with intelligence, and of the ineradicability of habits contracted and confirmed under powerful emotion, by presenting a faithful and trusted attendant, on their separation, with a rouleau, which the grateful servant supposed to consist of sovereigns, but which, on being opened, was found to contain a mass of hardened fæces. The bitterness of the disappointment was deepened by the contumelious words with which the insulting gift was accompanied: "I am sorry that I cannot reward you better."

There are rational men who are either insensible to noxious and noisome smells or who enjoy them; who frequent Abattoirs

and Knackeries, and who move unconcernedly in an atmosphere impregnated with the effluvia of corrupting animal matter. A similar indifference to such impressions has been observed among the insane, and even a more pronounced morbidity occasionally presents itself. A patient of our own lived in a water-closet in the airing-yard when not forced by the attendants to leave his retreat. Intreaties, compulsion, penalties, all failed to overcome this proclivity, until the anæmic and haggard aspect, and the anasarca of the man necessitated more heroic measures, and the building was removed. The patient was a melancholic, and had attempted suicide, and may have been induced, by a desire for concealment, solitude, or darkness, to adopt the singular course described; but he eventually recovered, and his obstinacy and obnoxious habits were not then, of course, adverted to or explained.

Among the industrial sections of the cloistered insane many excesses are committed in purloining uncooked meats, in stealing or sharing the unsavoury and inedible messes committed to them for the use of pigs, poultry, &c., reminding us of the parable of the Prodigal Son in Scripture.

We extract the following apposite illustration from the Annual Report of the Inverness County Asylum for 1874, by Dr. Aitken: "An imbecile employed in the garden and at the piggeries died somewhat suddenly, and the true cause of his death was only revealed by the post-mortem examination, when it was found that no less than eight pints were contained in his stomach consisting of porridge, raw cabbage, peelings of potatoes, pieces of carrot, turnips, peas, and barley, &c. The organ, it may be added, was measured before being opened, and its equatorial circumference was found to be 34 inches, its circumference in the plane of the greater and lesser curvatures 32 inches, and its circumference in the plane perpendicular to the other two planes 21 inches."

Such consumption of crudities and half-decayed aliments is more general where patients remain in their own families or under guardians, or where they are less watched and warded. Indisposition often follows such indulgence, and surfeits, and we have often been disposed to attribute the paroxysms of excitement, delirium, tremour, noticed in such demented and chronic lunatics, otherwise inexplicable, to poisoning from the putrescent or fermented substances to which they had access. Such manifestations are sometimes the concomitants of fits of excitement only.

Besides the objects enumerated in the preceding pages, my attention has been recently directed to lunatics who have ate or swallowed tar, thread, silk, swill, soap, cotton handkerchiefs,

clothes, buttons, crushed tobacco pipes, paper, the foot of a tea-caddy, needles and pins by hundreds, slate pencils, poultices, raw eggs, carbolic acid, and lucifer matches (see 17th Report, Board of Lunacy, Scotland).

To trace such moral obliquities to a common origin would be fruitless, except under the generalisations that, wherever mental disease exists, all faculties, feelings, and propensities participate and are, less or more, impaired or vitiated; that, in proportion to the extent and intensity of the prominent disease, are the special vitiations; and, that the most minute deviation from mental or moral health, even an innocent hallucination or a morbid instinct, may be fairly regarded as a part rather than a sign or prognostic of an affection involving the whole psychical constitution.

In order to show that we have not been dealing with microscopic objects, with selected or solitary cases, with what did, but does not, exist, we are enabled through the kind co-operation of medical superintendents, having at present under their charge the gross number of 2,355 patients in the lower walks of life, to subjoin the following as the proportions of the different classes treated of in the foregoing pages: of fæcophages, 73; sarcophages, 12; lithophages, 11; phycophages, 29. Of 155 patients of the affluent classes, 4 were fæcophages, 5 lithophages, and 8 phytophages.

ART. VIII.—STATE MEDICINE AND ITS RELATIONS TO INSANITY AND PUBLIC CHARITY.*

BY NATHAN ALLEN, M.D., Lowell, Massachusetts. Commissioner in Lunacy to the Commonwealth of Massachusetts.

BEFORE entering upon the discussion of any question, it is always proper to define the terms used, and state as far as possible the objects in view. The phrase "State Medicine" implies legislation, or provisions of some kind made by the State for the prevention of disease and the cure of the sick. Insanity is the most serious and complicated of all diseases, and, of sick persons, the insane, above all others, need treatment and care. By "public charity" is meant help to the poor and needy from some public source; or, in other words, the act of relieving the wants and sufferings of those who cannot help themselves by some public or associated action.

The relations of State medicine, then, to insanity and public charity may be considered from two points of view; first, what has the State done for the insane as a body, without distinction of class or connection; and, secondly, what provisions has the State made particularly for that portion of the insane who have no means of their own or friends who can support them?

In pursuing this subject we shall examine into the particular acts of legislation in its applications to both these two classes.

We propose to notice briefly what legislation has taken place on this subject, and what is the present state of the insane in the six New England States. There are certain general points of resemblance or correspondence in these respects in each of the States, and by analysing and comparing the facts when brought together it will enable us to see better what are the defects or excellences in each State. It is by such means and comparisons that the evils or defects in legislation may be better understood and the enquiry raised, what improvements can be made and what are the duties of legislative bodies to the public? No surer test of the moral state and progress of a people can be made than that of investigating what provisions it has made to relieve the wants and sufferings of its needy and dependent classes. The instances where individuals give liberally of their substance for this purpose, either by direct contributions or by legacies, afford nobler examples of benevo-

* Read before the Social Science Association, Detroit, Massachusetts.

lence and philanthropy; but where, by wise and humane legislation great numbers are relieved, in the best possible manner too, it shows, in the aggregate, a higher state of humanity and morality. The advanced steps which legislation here and there are taking in hygienic and sanitary measures to promote the health and welfare of people may be reckoned among the most promising omens of the times.

We propose in this paper *first* to notice the most important points in legislation in its relations to the insane in each of the States separately, and then follow it by comparisons and comments. We commence with *Maine*. The United States census of 1860 made the number of insane persons in Maine 794, and the census of 1870, 792, that is with a decrease of two persons in these ten years, which must be a mistake. The best judges in the State estimate the whole number to be about 1,200—it may be a little more or a little less. The Insane Hospital at Augusta had, in 1874, 406 patients; the remaining insane are found either in the city and town almshouses throughout the State, or in private families. As no reports have been made of their number, condition, or character, no definite information can be given. What proportion of these are paupers, or how many of them are supported in private families, we have no means of knowing. The overseers of the poor in this State make no returns as they do in some other States.

The hospital at Augusta, built in 1840, is the only asylum in the State, and accommodates about one-third of the insane in the State. But steps have been taken by the Legislature to build another; it is in the hands of a commission to select a location. The average number in the present hospital for several years has been about 400. It is strictly a State institution—built by the State—its trustees appointed by the Governor and Council, and also a Board of Visitors, consisting of three persons, whose duty it is to visit the hospital every week and report upon the same. The State expends about \$35,000 annually for the support of patients in this hospital, as follows: The general price of board is fixed at \$4 per week, though more than that is paid in some particular cases. The State supports wholly about fifty patients, and then pays \$1 50 per week for 290 more, having a settlement in some city or town which pays the balance. About sixty patients are supported from private resources. The hospital has been very much crowded for years, so much so that the Legislature two years ago ordered some forty or fifty of the lowest grades to be discharged, but it was hard to get rid of them, having no suitable place to which they could be removed. The Superintendent estimates that nine-tenths of the persons belong to the incurable

class. The manner of committing persons to the hospital is as follows: Complaint must be made first to municipal officers of cities or towns, who constitute a board of examiners, calling before them such testimony, from friends and acquaintances, as to satisfy them that the person is insane. In addition, they must obtain the certificate of two respectable physicians certifying the same. Cases connected with crime are committed by the courts.

INSANE IN NEW HAMPSHIRE.

The United States census of 1860 returned the number of insane at 503, and the census of 1870 at 548, making an increase in these ten years of forty-five. There never has been any exact enumeration of the insane in this State. The Superintendent of the hospital at Concord estimates the number at 700, while others would make it considerably larger. About 370 of these are in the asylum at Concord; 150 are in the county almshouses; nearly 100 are in the town almshouses, and the balance, whatever it may be, are supported in private families. In 1872 a commission was appointed by the Legislature "to enquire into the condition of insane paupers throughout the State;" but so small was the appropriation made for the purpose that only about one-half the State was canvassed. No returns are made by the Overseers of the Poor, and nothing is known of the number or condition of the insane supported in private families.

The Asylum at Concord is the only institution in the State intended for the insane. There are ten county almshouses, several of them quite large, in which are gathered quite a number of insane persons, in two or three from thirty to forty each, and connected with some of these almshouses is a separate building expressly for the insane. The asylum at Concord, established in 1842, was built by the State, its trustees, appointed by the Governor and Council, consisting of twelve persons, and then a Board of Visitors of eight, with the Governor at the head, making in all twenty. It is made the duty of one or more from these Boards to visit the asylum twice a month. The State appropriates annually \$6,000 for the support of patients in this hospital. While it is strictly a State institution, it is managed very much as a private one, as though there were no paupers confined or supported in it. Most fortunately it has received large legacies, amounting in all to \$250,000, the income of which goes towards supporting the insane poor. The price of board is fixed at \$5 per week. About fifty patients are supported by the State alone; nearly

200 by the State and towns in common, and 130 by friends, or from their own means. The income from private funds is applied from year to year to helping just such indigent patients as the superintendent and trustees think need it most. In this way many indigent insane are kept there as private patients that could not be were it not for this. No distinction in price or classification on the ground of support is made, and the term "pauper" is unknown in the institution. This feature in the management of the New Hampshire Asylum is worthy of high commendation.

The county almshouses are placed under the care of county commissioners, where about 150 insane persons are supported by counties and towns at a moderate expense. In some of these almshouses it is represented that the insane are not properly cared for—have no hospital treatment when they might be cured by being sent to the asylum. As to the condition of the insane in town almshouses, or in private families, nothing definite is known.

The law, in the committal of persons to the Asylum, provides that it may be done by the judge of any court, by Overseers of the Poor, by County Commissioners, by legal guardians and friends. But no person can be committed without a personal examination by two reputable physicians, whose character and genuineness of the certificate must be certified to by the Mayor of the city or chairman of the Board of Selectmen where the person resides. An important law passed the Legislature in 1814 requiring visitation of some one or more of the trustees at the hospital every other week to learn complaints and report them to the whole Board in case of any difficulty. Stationery is often furnished to inmates, who can send letters to any member of this Board, and such letters to friends are transmitted at once under seal. In case of deaths out of the ordinary course a coroner's jury is called the same as outside of the institution. The legislation of New Hampshire in behalf of the insane has been conducted with the greatest economy.

INSANE IN VERMONT.

The census of 1860 returns the number 693, and of 1870 as 721, making an increase in ten years of 28. No attempts have ever been made to ascertain the exact number of the insane in Vermont. In the census of 1870 it is thought the whole number of inmates of the asylum at Brattleboro were counted, which should not have been, as about 200 of these at that time belonged to other States. No returns of the overseers of the poor are made, so that the number of the insane in almshouses cannot be ascertained, neither can we learn anything as to the

number or condition of the private insane in the State. There must be a large number of this class scattered throughout the State, in all probability a larger number than what the census gives, judging by its returns in other States. Then, if the census of 1870 included all the inmates of the asylum at Brattleboro belonging to Vermont, we could not estimate the whole number in the State much above 721; perhaps if we should estimate it at 800 it would not be out of the way.

The asylum at Brattleboro, established in 1836, is the only institution for the insane in the State. This was started by a legacy of \$10,000, to which the State added appropriations from time to time. It was formerly supposed to be strictly a State institution, but on a careful examination a few years since it was found to be incorporated as a *private* concern, that it was placed entirely in the hands of a trustee board, self-perpetuating. Its charter provided for a board of visitors in the judges of the Court of Chancery, but it seems practically to have been a superfluous office. The Legislature in 1845 provided for a Commissioner of Lunacy, with certain powers of visitation and report, with very small compensation for services. As the appointment was only for two years at a time, and chosen by the Legislature, it has often been changed, so that little of value or importance could be accomplished by the office. The number in this asylum for years has averaged about 475, one-half of which are private patients, one-third are town, and one-sixth are State. The price of board for private patients varies, but for State it is fixed at \$3 per week, which is considerably below the cost. The State for several years has appropriated \$5,000 for this purpose. It is understood that towns pay about the same as the State.

A bill has been before the Legislature for years for the erection of a State Lunatic Hospital, and for making other changes in the laws relating to the insane. As the State has no asylum or hospital of its own to accommodate the insane, it is presumed the matter will be pushed until it has one. The asylum at Brattleboro, starting as a *family*, in which the influences and relations of home-life have always been systematically cultivated, situated in a rural district, with ample grounds for exercise and cultivation, has had a prosperous career. Though it has been sustained in a great measure by private resources, it has apparently answered the wants of the State. The manner of committing insane persons to a hospital in Vermont is peculiar. As this asylum is located in the County of Windsor, the law provides that the Court of Chancery appoints a medical examiner in this county, before whom all persons supposed to be insane are brought and examined,

and whose certificate alone entitles to admission into this asylum. We cannot find that there is any different law of committal applicable to other parts of the State. At the last session of the Legislature there were six or seven Acts proposed and discussed, intended for the relief of the insane, but they were all voted down except one, providing for discharges of patients of doubtful cases, referring them to the family physician and the Commissioner of Lunacy. In one respect Vermont differs from other New England States; it has much less of a foreign element in its population; only a small representation of Canadian French.

INSANE IN CONNECTICUT.

The United States census of 1860 reported the number of the insane in Connecticut 281, and the census of 1870, 772. The population had increased a little over 75,000 within this period, adding one-sixth to its numbers, but the census of the insane is reported almost three times larger for 1870 than for 1860. This was evidently a great mistake. Even the census of 1870 makes it altogether too small. In 1868 a committee was appointed by the Legislature to canvass the State carefully as to the number of the insane, with reference to building a State hospital, and the actual number found by them was 1,066, while the census two years afterwards returns the number 294 less. With an increase of population from 1868 to 1875 of over 50,000, undoubtedly the number of the insane must have increased from 1,066 in 1868 to the present time to over 1,200 certainly, and probably to over 1,300 in 1875. The State Hospital at Middletown has some 400 patients, and the Retreat at Hartford has about 150, making only 550 under treatment in hospitals. These two institutions constitute the only establishments in the State for the insane. If we allow 100 more for the changes in these hospitals it will then leave one-half of the insane in the State to be cared for outside. These must be in almshouses or provided for in private families, and no report can be given of them. The Retreat for the Insane at Hartford was started in 1824, and is strictly a private institution, though answering, in some respects, the wants of the State till eight or ten years since. Its last report bears the imprint of its *fiftieth* annual report, and, though it retains now only some 150 patients, it had almost double that number for some years before the general State Hospital was built at Middletown. This retreat has been considered one of the best-managed institutions of the kind in the country. The State has never had directly any control over this institution, though

for many years it sent and supported patients in it. The price of board or expenses in the Retreat depend on the accommodations and character of the patient. In 1866 and 1867 the State built a large hospital at Middletown for the insane, and it is managed strictly as a State institution. It has some 400 patients, a large number of whom are supported at public expense. The price of board is fixed at \$5 per week. The State bears the entire expense of a small number, and pays one-half the expense of over one hundred, the other half being paid by towns; and then the State pays half the expense of over one hundred more, who are considered private patients, and the other half is paid by friends. The number supported entirely by their resources or by that of their friends is not very large. In the last report of this hospital the manner of support is thus given: Forty-one patients pay their own expenses; seven were supported by the State; one hundred and two equally between the State and friends; and one hundred and three equally between the State and towns. This speaks well for the liberality of the State in encouraging towns and the friends of the insane to send all such cases at once to the hospital. Committals are made by friends, by judges of the courts, and the order of the Governor. But in all cases the court appoints some "regular and respectable physician" in the place or region where the insane person resides, who shall fully investigate the facts of the case, and render a report to the judge of the court.

In the last report of the State Hospital the Superintendent says that of the 395 patients remaining only 35 would properly be considered *curable*. This statement presents rather a discouraging view of the character of the patients here. An interesting experiment of the cottage system is being tried connected with this hospital. Two small cottages are occupied by some thirty chronic insane, making up two families, and, in a great measure, taking care of themselves. The Superintendent remarks that the "very success with our imperfect two little cottages makes us long for the day when we may have more such structures adapted to the wants of such patients."

RHODE ISLAND.

The census of 1860 returned 288 insane, and the census of 1870, 312—an increase of only 24 persons, with an increase of almost 45,000 inhabitants in those ten years. If we should add to the number of insane returned by the census in the same proportion as in other States, it would make the whole number in the State nearly 500 persons. The Butler Hospital

has at the present time about 130 inmates, and the Asylum for the Chronic Insane has 160, making 290 persons. There must be in the Providence and town almshouses about 100 insane, and probably as many more in the State are supported in private families.

The Butler Hospital, started in 1849, is strictly a private institution, and has received large donations from individuals. It has permanent funds amounting to one hundred thousand dollars. The lowest price of board is fixed at \$7 per week, but most of the patients pay a larger sum. It has always been considered one of the best-managed lunatic hospitals in the United States, and for more than twenty years was superintended by Dr. Isaac Ray, celebrated for his writings on insanity both at home and abroad. This hospital, up to 1870, was the only institution in the State provided for the insane. In 1868-9 it became very crowded, and for many years complaints had been made respecting the treatment of the insane in the town almshouses in the State. A movement was made to enlarge the accommodations for this class, and it was decided to establish an asylum for the chronic insane—that it should be located in a rural district with a large portion of land attached. Some four hundred acres of good land were purchased in Cranston, upon which also it was decided to locate several other State institutions. But this asylum for the insane is entirely distinct by itself and has been in successful operation now five years. It has 160 inmates, pronounced when coming there incurable, though quite a number have entirely recovered. Without going into details we think we may safely say it provides the best arrangement for the chronic insane in the country. Sixty of the patients are wholly supported by the State, some more than that number by the towns, and the rest privately. About three-fourths pay two dollars per week, some twenty pay three dollars and a few pay four dollars. The buildings are one story, light, roomy and airy, with plenty of land for cultivation. In the opinion of the best judges the inmates here are most comfortably provided for—much more so than they were before coming to this asylum. It accommodates not only the State but towns and individuals, making annually a saving to the State alone of over \$12,000.

The law for committing persons as insane to the hospital is very similar in Rhode Island to that in other States. As there has been only one institution, and the State itself quite small, persons moving in such a matter become more easily known to the public, so that there is much less danger of abuse.

INSANE IN MASSACHUSETTS.

The census of 1860 returned the number of the insane 2,246, and that of 1870, 2,662. But the census report comes very far short of the real number. The only thorough canvass ever made in this State was in 1854, by a commission, which found 2,632. It will be seen by this that the actual number found in 1854 was only thirty less than the census return of 1870, notwithstanding the population had increased almost half a million.

In 1874 the Board of State Charities, from a careful examination of the whole number of insane in all the institutions and almshouses in the State, made the number 3,624. If to this is added the number supported in private families, the whole number of the insane in the State cannot vary much from 4,000. In October 1874, they were distributed as follows: In the three State institutions, Worcester Hospital, 485; Taunton, 508; Northampton, 475; Tewksbury Asylum, 319; South Boston, 206; Ipswich, 61; Somerville, 150; and some fifty in smaller institutions. The overseers of the poor return about 500 in the city and town almshouses scattered through the State, and then nearly 150 more partially supported outside. This makes only about 3,000 in the institutions and almshouses. The State supports some 500 in the hospitals at an expense of \$3 50 per week, and over 300 at the asylum in Tewksbury for the chronic insane at \$2 per week, making the whole expenditure for the year \$125,000. The cities and towns support at the same rate in these hospitals some 650, paying annually about \$125,000. Then these municipalities support some 500 in almshouses, at a rate from \$2 to \$3 per week, amounting to about \$50,000 annually. Then there are two county hospitals, one in Suffolk County, at South Boston (206), and one in Essex County, at Ipswich (60), making an annual expense of \$70,000. We have then 2,000 insane persons supported by the State, counties, cities, and towns, at an annual expense of nearly \$400,000.

The remaining insane are scattered in hospitals and families. In the three State Hospitals there are over three hundred patients supported by private means at an expense from \$5 per week and upward. The McLean Asylum, at Somerville, near Boston, established in 1817, is strictly a private institution, has on an average about 150 patients, supported at an expense of \$15 per week and upward. There are four other small private asylums or family institutions for nervous diseases and chronic insane, where the expenses vary from \$10 per week and upward. There are a large number of insane persons sup-

ported by private means in families throughout the State, but as to their exact number or real condition we have no means of knowing. The only thorough enumeration of the insane ever made in the State was in 1854, by a commission of which Dr. Edward Jarvis was at the head. In this return were found 716 insane persons at their homes, cared for by their friends; and this enumeration took place more than 20 years ago, since which the population has increased near half a million. From careful enquiries made respecting the insanity of each person it was reported at the time that just about one-half this number were fit subjects, and should have been in hospitals; but of 320 towns insane persons were found in all but 19, which were small and situated mostly in the outskirts of the State. This enumeration of the insane in Massachusetts in 1854 is deserving of special notice, as it is the only instance in the United States where a complete and thorough canvass has ever been made as to the exact number of the insane. It has been found that the census in this respect is not at all reliable—that if other statistics are returned correct, those of the insane are not, and other means must be resorted to for this knowledge. One of the most important steps taken in legislation in this State is the provision made for the support of the chronic insane by themselves. This experiment commenced in 1866 by erecting a large building connected with the State Almshouse at Tewksbury, in which three hundred chronic insane—all paupers—have been supported at an expense of about \$2 per week, saving thereby over \$25,000 annually to the State. Our object of establishing this asylum was to relieve the hospitals of their crowded state, but they are still very crowded. The State is building at present another large lunatic hospital at Danvers at an expense of over a million of dollars. In 1874 the Legislature provided for the appointment of Commissioners of Lunacy, whose services were to terminate after making a report, which was done in January, 1875. In the matter of committing persons in Massachusetts to hospitals the law provides that it can be done by friends, by officers of cities and towns, and by the judges of courts. But in all cases a certificate certifying to the insanity of the person must first be obtained, signed by two physicians, one of whom should be the family physician. Complaints have been made for years that it was altogether too easy to commit and confine persons for insanity, and that greater checks and safeguards should be provided.

Having now presented an outline of the provisions made by legislation for the insane in the New England States, it affords an opportunity for making comparisons and comments,

for in this way instructive lessons may be learned. As these States are among the oldest in the Union and have generally taken the lead in providing for the dependent and destitute classes, it is presumed we can find some advantages to recommend, and perhaps some evils to expose and condemn.

The first enquiry will be in reference to the increase. *Increase.* Is insanity increasing faster than population? On this question there have been differences of opinion among what would be considered good judges. During the past year I had a careful investigation made of the increase of population and insanity by the census reports, and found that from 1850 to 1870 there had been a decided increase of insanity in Massachusetts over that of population, amounting to 12 per cent. in these twenty years. By the same investigations it appeared that there had been also an increase of the insane disproportionate to that of population in the other New England States. What may be the real causes of this increase, and from what classes in the community it comes, are questions we cannot easily determine. In Massachusetts there is some evidence to show that this increased insanity comes mostly from the foreign element, but it is not so in some of the other States. One thing is evident, that lunatic hospitals do not prevent the increase of insanity—that is, as far as we can judge. It was thought in Great Britain when hospitals for the insane were first established it would put some check upon the increase of insanity; but, after thirty or forty years' experience, that expectation has not been realised. A similar result has been reached in this country.

It is generally conceded that the higher or more advanced civilisation becomes the greater is the amount of insanity. Now, this cannot be the fruit or result of true civilisation, but comes from something wrong—some artificial habits, some unnatural, unwholesome way of living, some false and corrupt state of things in society. This undue increase of insanity may arise, in part, from too great pressure upon the brain and strain on the nervous system, by education, by excitement, by strife and competition in business, &c., and with some by what may very properly be styled “too fast living.” When it is borne in mind that these and other evils are not unfrequently propagated by the laws of inheritance, in an aggravated and intensified form, we see readily how our people grow older from one generation to another, there follows increased insanity. It would be an interesting experiment to make, if we could get the statistics for a series of years on population and insanity in several of the old and the new States, and see how they would compare. Connected with

this increase of insanity may there not be a new feature or change in the type of the disease taking place which calls for particular notice? The trustees of the Butler Hospital, not medical men, but discriminating business men, some of whom have long been connected with the institution, make, in their report for last year, this striking remark. In noticing a decline in the proportion of recovered patients they say: "It would seem as if the larger appliances and more diversified ministries which have been from year to year brought into requisition have not kept pace with the growing difficulties of treatment, as if the malady was finding a deeper seat—arising apparently in a larger proportion of cases from *original defect of organisation*, and less frequently from mere accidental causes. If this be so—if the statistics presented by the records of the institution be sufficiently extended to afford a reliable indication—the patriot, as well as the philanthropist, is interested in ascertaining to what causes at work in our community the deterioration of brain is attributable."

There is much truth, we have no doubt, in the statement here made by these trustees. Such is the type of our *present civilisation*, that while it is attended with great advantages it begets many evils. Some of these evils grow out of an undue development of the brain and a morbid state of the nervous system. It surely becomes the patriot and the philanthropist to enquire if some of these evils cannot be avoided, or at least abridged.

One of the most interesting and important features in State medicine is its *charitable* work. In providing for the insane the State, as a general thing, builds the hospital. Maine, New Hampshire, and Connecticut have each one hospital for this purpose, and Massachusetts has four. In Rhode Island the Butler Hospital and in Vermont the Brattleboro Asylum, both private institutions, answer very much the purpose of State hospitals.

In each of the New England States there are indigent insane, having no means, no friends to support them, no claim on any city or town by the laws of settlement. These are adopted and supported by the State, generally in some lunatic hospital. But the charity of the State does not stop here always. Maine, New Hampshire, Vermont, Connecticut, and Rhode Island pay from one-third to one-half the expense of that class of the insane belonging to cities and towns, provided they are sent to hospital for treatment. Nothing is paid by the State for those in local almshouses, and the object of paying part of the expense of city or town paupers is to induce their authorities to avail themselves of all possible means for the cure and improvement of this class.

The State of Connecticut, finding some years since a large number of insane persons, with small or limited means, and friends unable to support them, and on this account could not get the proper benefit of the hospital, and would not become paupers, offered to pay one-half the expenses of such persons while in the hospital. Accordingly, for several years more than one hundred private patients of this class have been found in the State hospital at Middletown. This is, we believe, the only instance where a State has proffered such aid, and it sets a noble example. In the asylum at Concord, New Hampshire, may be found a grand example of private beneficence. This asylum has most fortunately some \$250,000 funds, received by legacy and donation. A large proportion of the income goes to support in the institution indigent persons who may also be assisted by friends. Over one hundred private patients are thus yearly aided by this charity. Insane persons are kept here by this means who could not be otherwise. It relieves the State and encourages private benevolence. The friends will continue to do for them and take far more interest, as long as they are not *paupers*. So quietly is this private charity distributed that it is hardly known who are its recipients.

In Massachusetts the lines of support are very closely drawn; the State supports its own; so do cities and towns their own, and those who are private must receive private support, whether in a State hospital or private asylum. The State appropriates money liberally for the insane, but does only what it is obliged to do. It supports in the lunatic hospitals about 500 and 300 for the chronic insane, the whole at an annual expense of some \$125,000. Cities and towns support in the hospitals about 600, and there are some 300 private patients in these institutions. Now, it has been an obvious fact that the proportion of pauper insane has been relatively increasing for many years in Massachusetts; that many starting as private cases soon become paupers, and, of course, must be supported at public expense. There can be no question but that the longer an insane person can be kept as a private patient, the longer friends will look after and do for such a person, the better spirits and more hope the insane will have of recovery. Then, if we extend help properly to the indigent private insane who need and are outside of hospital, it might induce such to seek the benefits of the hospital and prevent large numbers from becoming paupers. In this way a great amount of good might be accomplished.

EIGHTH

CHRONIC INSANE.¹

The question is now asked in all the older States, what are we to do with the chronic insane, and how are they to be supported? Unless there is some means besides death of eliminating and removing the incurable and the harmless insane from our lunatic hospitals these institutions become filled up with a class of patients, very few of which can ever be benefited by curative treatment. This is becoming already a serious evil in several of our older and larger institutions. These hospitals, in their construction and management, were intended expressly for the *cure* and *treatment* of the insane, and, accordingly, have been provided with the best possible means—medical, physical, and moral. Such means and appliances require a large outlay in their start, and then in keeping them up become very expensive. After the insane have passed through the curative stages of treatment without relief, and settled down into an incurable, harmless state, what is to become of them? In their case the same medical skill, the large number of attendance, and costly accommodations are no longer needed. It is not a *hospital* but a *home* they want, suitable exercise, plenty of sunlight, pure air and water, proper nourishment, pleasant surroundings, etc. These can be furnished at much less expense than large costly hospitals, with expensive medical supervision and other attendance, under circumstances, too, where the advantages of hygiene and sanitary laws may be employed more successfully. Aside from comfortable house accommodation all that can be done for this class is to supply properly their physical wants, and surround them with wholesome influences. As far as the men are concerned, farm work is the best possible exercise for them, as well as plain, country style of living the best regimen. In former years the almshouse has been the principal receptacle of the chronic insane discharged from the hospital. But Massachusetts and Rhode Island have now permanent asylums for the chronic insane, which, in some respects, are the only institutions of the kind in the country. We should except the Willard Asylum, New York. The asylum in Massachusetts was established near eight years ago, resulting from the crowded state of the hospitals, and partly from the fact that the State almshouses contained large numbers of this class, mixed up promiscuously with other paupers. This asylum is located at Tewksbury, on a large farm owned by the State, consisting of a brick building 250 feet long, forty-five wide, and four stories high, accommodating 300 insane persons. Though located near the almshouse, the asylum, with its inmates and yards, are entirely distinct. Within the eight years of its his-

tory, more than a thousand chronic insane have been admitted into this asylum, mostly coming from the State hospitals. Nearly one hundred of these have recovered or improved, not from medication, but from work on the farm. In the opinion of good judges the condition of the inmates here has been made as comfortable as it was before their admission, and the experiment as a whole has been regarded as a decided success. The expense has averaged for each inmate a little over one hundred dollars a year, and the whole saving to the State amounts to \$25,000 each year, making over \$200,000 since the asylum was first established.

The asylum for the chronic insane in Rhode Island, being only about one-half as large, saves the State annually more than \$12,000. This is located upon the State farm, near the State almshouse and workhouse, but is entirely separate in all its arrangements. The buildings are only one story, well lighted and well ventilated, with large yards and plenty of ground for cultivation. While a few of the inmates come from the Butler Hospital, a large proportion come from the various almshouses in the State, the expense being borne in common between the towns and the State.

The history of this asylum for the chronic insane in Rhode Island deserves special notice. It has always been admitted that the Butler Hospital is one of the best-managed institutions in the country, with very few changes in its superintendency or Board of Trustees. Dr. Isaac Ray, the most distinguished writer on insanity in the United States, presided over this hospital about twenty years, and in his annual report for 1866 presented the most elaborate argument that can be found against the separation of the acute and chronic insane, maintaining that for the interests of each that they should always be kept in the same institution. Within one year from that date the friends of the insane were conferring together in Rhode Island with reference to establishing an asylum for the harmless and incurable of this class; and in 1869 such an institution was established, with one hundred patients. Its sixth report is just published, showing 170 patients, a larger number than is now found in the Butler Hospital itself. Dr. Sawyer, the successor of Dr. Ray, acknowledges that this asylum is an excellent institution, and is a decided relief to the hospital. There is only one opinion among the friends of the insane in the State, that it presents a great improvement over the old order of things; and, from a careful personal inspection, I can say that it is, of the kind, a model institution, and worthy of imitation in every other State.

COMMITTAL OF THE INSANE.

The manner or provisions of committing persons to a lunatic hospital are very important, as far as the law is concerned. In the several New England States there are some general resemblances, but in no two States is the process alike. In the State of Maine city and town officers take the lead in obtaining evidence, and the certificate of insanity must be signed by "two reputable physicians." In New Hampshire the judges of courts, overseers of poor, county commissioners, guardians, etc., lead; the certificate must be signed by two reputable physicians, whose characters and genuineness of certificates must be sworn to before municipal or town officers. In Vermont the judge of one of the courts appoints a physician in Windsor County, who shall be the examiner of all cases committed to the Brattleboro Asylum. In Connecticut the court appoints a reputable physician in the place or region where the supposed insane person resides, who shall make enquiries and personal examinations as to his insanity, and make his report to the court. In Massachusetts the certificate must be signed by two physicians, after personal examination, and one of whom should be the family physician of the insane, whereas, in many, if not a majority, of cases the individual has no family physician. As the medical evidence is the most important, this should be most carefully guarded. While in a majority of cases the provisions in any one of these States may be sufficient, still there may be danger at times that now and then one might be unjustly and wrongfully committed as an insane person. It may be said, if there should be a mistake made, it would be soon detected in the hospital, and the supposed insane person would be forthwith discharged, but this is not so; it is not always an easy thing to correct such mistakes. Besides, immense injury may be done before the evil is corrected. Inasmuch as great responsibility must rest upon the medical testimony, special pains should be taken to secure the best and most reliable men. If men are appointed for this purpose, and are known to be responsible to the public for the results of their examinations, they will naturally feel this responsibility and be more careful than if the parties are picked up here and there. It is not mere skill or experience in mental diseases that is wanted, but integrity and honesty of character that has been tried and is unquestioned. There is a chance, we think, for improved legislation in each of these States which would throw greater safeguards around the committal of all persons who are charged with insanity.

While legislation has laboured, in a variety of ways, to promote the interests of the insane, there is one feature which has been greatly neglected. We refer to a more careful supervision of institutions, to a more special study into the causes of insanity, with reference to securing not only the best mode of treatment, but to see if some means cannot be employed for checking or preventing the disease. This can be accomplished only by legislation in establishing a commission or appointing one or more persons adapted to the work and who shall make a business of it for a series of years. This work cannot well be carried on in small States, or at least cannot be so systematically and thoroughly carried on as in large States where the material is sufficient to occupy all the time of a commission. Still, in Vermont a good work has been accomplished. In 1845, just thirty years ago, the Legislature established a permanent commission of insanity, "whose duty it was to visit the asylum monthly or oftener, with the trustees or alone, to examine into the condition of the institution, the management of the patients and the general welfare of the asylum, and to make a report thereon annually to the Legislature." This officer is chosen once in two years by the Legislature and receives small compensation.

Says Dr. Draper, the present Superintendent of the asylum: "The Commissioner thus occupies the position of guardian to insane wards of the State, and visiting agent of the public. I think the office has been useful, and is eminently a proper one. If in addition to the duties required in relation to the insane in this institution, it was also made obligatory upon him to visit all the insane in the State in the town almshouses and report upon their condition, the public interests would be still better served." But as this officer was often changed, and was paid only \$300 a year, not much certainly could be accomplished. Several of the other New England States have at various times appointed a Commission on Lunacy, but only temporarily, for specific purposes, with no power but advisory, and to make a report which terminated its agency. What is wanted is a permanent living commission like the English or Scotch, with all necessary powers and the assurance of continuance. Nobody can realise the value and importance of the labours of such a commission but one who has witnessed its beneficial effects in Great Britain, and, from personal knowledge of our own institutions, can see what advantages might be obtained here by means of a similar agency.

Dr. Merrick Bemus, who was superintendent for fifteen years of the State Lunatic Hospital of Worcester, and who has visited similar institutions in Scotland and England, made last

year the following statement in reply to the enquiry, "What improvements have been made in the lunatic asylums in Great Britain, and what relation does the Lunacy Commission hold to the institutions?" Says Dr. Bemus:—

"The improvements are many. They have supplemented and modified their system to such an extent that, while it bears some resemblance to the past, the present is studded all over with new features. The improvements for ventilation, cleanliness, classification, for freedom, both outside and inside, are most noteworthy. Their advances in the direction of labour among the patients, in the immunity from physical restraint and seclusion, in the granting of innocent indulgences to trustworthy patients, are far beyond what is now practised in any American hospital.

"The Lunacy Commission has done much, and its continued operation is of incalculable benefit, not only to the insane, but also to the officers of the institutions, they have improved the condition of the insane in many ways, and have rendered a residence in a lunatic asylum less irksome and hopeless to those who are obliged to submit to the restraint and treatment in a public institution. They have removed the hard and forbidding cruel fixtures for restraint and seclusion. They have well nigh emancipated the insane from the use of mechanical restraint; have quite abolished every kind of punishment and task, have raised and improved the quality of food and clothing. They have opened the apartments of the furious and filthy to the sun and air, and opened the doors, that all may enjoy, in some degree, the freedom of the several establishments. More than this, they constantly act as guardians for the insane, and they strongly support and strengthen those who conduct faithfully the affairs of the asylums. They have a systematic correspondence with every institution, and by reports of officers of each they know, not so much the economies of each, but, what is better, they have an understanding of the commitments to such an extent that they can easily tell the justice and propriety of any questionable case. They are made to know of all cases of restraint and seclusion, and they interest themselves in every case of hardship, and thus lighten the burdens of the insane without in any way increasing the cares of the officers.

"From their frequent inspection of the several institutions, and from the mass of facts gathered by their correspondence, they publish every year a valuable report of their labours, with plans, suggestions, and histories of cases of hardship, abuse, and suffering."

When the great advantages, as here described, arising from Lunacy Commissioners are considered, it would not seem possible that the superintendent of any hospital would oppose the appointment of such a commission. The insane would not be the only parties benefited, but the hands of the trustees and superintendents would be held up; much of the prejudice existing against such institutions and their managers would thus be done

away; less complaints would be heard from the insane and their friends, and more confidence would be placed in those institutions, so that acute cases of insanity would be more promptly placed there for treatment. The great numbers now scattered in almshouses and private families would be looked up and better cared for, and the institutions themselves would be more sure to reap the benefits of all improvements made at home or abroad for the care and treatment of the insane. There is one other advantage, or advanced step forward, to secure which something certainly should be done. We refer to some systematic measures for the *prevention* of the disease. In all the vast outlay and immense amount of labour expended in behalf of the insane, scarce any efforts have ever been put forth for the prevention of the malady. In the practice of medicine the question is now constantly raised how to *prevent* as well as to *cure* disease; and in consequence of the great improvement in society in respect to a knowledge of hygiene and sanitary laws many diseases are prevented—in fact, it is admitted that full one-third of all the diseases and premature deaths can thus be prevented. But the community must be made better acquainted with the *causes* of insanity, and that these causes are subject in a great measure to the control of human agency. Some years since the superintendent of one of the large State hospitals in Massachusetts said, in closing a paragraph in his report, that “the more we see of mental disease, in its various forms, the more we are convinced that the study of its *prevention* is infinitely more important than even the study of its cure, and that the discrimination of more correct views of the true way of living and a more rigid observance of the laws of health and nature would greatly diminish its frequency.” Since that remark was made in a public report more than a million of dollars has been expended in the cure and treatment of the disease by this same hospital, but not one dollar for the dissemination of knowledge for its prevention. How long will the managers of our State institutions pursue such a course? Will not the public some time learn the truth of the proverb, that “an ounce of prevention is here worth more than a pound of cure”?

ART. IX.—LUNACY IN SCOTLAND.

THERE exist in Scotland at the present time 8,069 persons of unsound mind. Of this number, 3,760 are males, 4,309 females, 1,455 private patients, and 6,614 pauper lunatics.

The population of Scotland is 3,462,879, and the proportion of lunatics to every 100,000 of the population is 228. Ten years ago it was only 203, so that there has been a considerable increase of insanity; but whether this indicates a *real* or *apparent* increase, we are unable to state. The probability is that more lunatics are now under the supervision of the law than formerly, and consequently appear on the Commissioners' books, and that there is *no* real increase of lunacy.

This table shows the number of the insane placed in Establishments in 1858, and in each of the ten years 1865–1874, distinguishing between males and females, and between private and pauper patients:—

TABLE X.

Years	Numbers placed in Establishments, excluding Transfers								
	Private			Pauper			General Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1858	193	213	406	436	606	1,042	629	819	1,448
1865	198	221	419	484	559	1,043	682	780	1,462
1866	235	210	445	538	585	1,123	773	795	1,568
1867	210	235	445	597	663	1,260	807	898	1,705
1868	182	215	397	628	691	1,319	810	906	1,716
1869	219	218	437	666	800	1,466	885	1,018	1,903
1870	208	223	431	607	750	1,357	815	973	1,788
1871	227	254	481	647	708	1,355	874	962	1,836
1872	185	197	382	701	783	1,484	886	980	1,866
1873	201	256	457	740	902	1,642	941	1,158	2,099
1874	200	228	428	749	828	1,577	949	1,056	2,005
Average of the 10 years 1865–74	206	226	432	636	727	1,363	842	953	1,795

It thus appears that, on an average of the ten years 1865–1874, of every hundred patients sent to Asylums, 24·1 were private, and 75·9 pauper.

With regard to the increase of lunacy in Scotland, the Commissioners say :—

“The figures in the Table do not indicate any steady or appreciable increase in the admission of private patients into Asylums. On the contrary, in view of the increasing population, they may rather be held to indicate a decrease.

“As regards pauper patients, however, the Table shows a considerable and progressing increase in the number of admissions. In 1858 the number of pauper lunatics placed in establishments was 1042, while in 1874 it was 1577, being an increase of more than 50 per cent. During the same period, the increase of the general population was only about 14 per cent.

“It does not necessarily follow from these facts that there is any greater production of insanity in the country. It is possible that they only express what might be looked for as the result of the increased facilities for gratuitous treatment and maintenance in Asylums, which result from the operation of the Lunacy Laws.

“We have reason indeed to believe that some of the lower class of private patients, the cost of whose support in Asylums was with difficulty defrayed by their friends, are now registered as paupers and supported in whole or in part out of the poor-rates. This of course reduces the admissions of private and increases those of pauper patients. Only a small part, however, of the increase which has taken place in the admission of paupers can be accounted for in this way. A much larger part of the increase is probably due to the placing of patients in public establishments who were formerly kept at home. Gratuitous treatment in Asylums is now obtained with greater ease; our institutions are more scattered over the country, and patients entering them do not require to be removed so far from home and friends; the feeling of repugnance to treatment in Asylums has undergone a diminution since the principles which guide that treatment have become better known: the working classes have been busier, and the presence in the household of an insane member has been increasingly felt to interfere with the comfort and prosperity of the sane members; the trouble involved in satisfying the views of the Board as to what constitutes proper care and treatment in the case of pauper patients provided for in private dwellings has led parochial surgeons and inspectors of poor more frequently to recommend and resort to Asylum treatment, thus relieving themselves of trouble and responsibility; the greater wealth of the country has weakened those obstacles to the adoption of the more costly form of treatment which operate in poor communities;—to these and various other such causes, may fairly be attributed a considerable proportion of that increase in the number of pauper patients annually admitted into Asylums, which has taken place since 1858 when the Lunacy Law came into operation.

“But these causes would probably have operated with less force if there had not grown up, during the same period, a change of medical and public opinion as to what constitutes lunacy, or at least as to what constitutes that degree and kind of lunacy which can be certified as rendering the subject of it a fit and proper person to be placed under

care and treatment in an Asylum. This last, as well as the mere existence of lunacy, must be certified of every patient who is placed in a public establishment for the insane, and it is clear that considerations apart from the patient's condition are almost certain to influence the granting of such certificates. Our experience shows it to be a mistake to say that 'human power cannot multiply or modify the lunacy in the country;' for in practice it is found to do so easily and largely, at least as regards the lunacy which is brought into relations with the State. On this subject it was pointed out in our Fifteenth Report, that 'the existence of lunacy, in so far as it is officially recognised or required to be dealt with by the State, is at present decided by the certificate of two medical men; and, indeed, must always be determined in that or some similar manner. If there be persons who imagine that a uniform standard of mental soundness is accepted by all medical men, or by any one medical man in all circumstances, they must have little experience to guide them. Such certificates are always signed after a consideration of the social as well as the medical circumstances of each case. And it is scarcely open to doubt, that in actual practice the source from which the required expenditure is to be obtained is, rightly or wrongly, a common element in this consideration.' *

"In addition to the change of opinion or of practice due to the changed circumstances resulting from the operation of the Lunacy Laws, there is probably also a deeper change in medical opinion as to what constitutes insanity, the tendency of which is to include among lunatics persons who formerly would not have been so included. In this way again an apparent increase in the number of the insane in the country may take place without any real increase in the amount or production of insanity. There is perhaps one beneficial effect of this change, which presents itself in the readiness with which Asylum treatment is extended to those labouring under the transitory forms of mental unsoundness. It is clearly a change, however, which in some of its effects may be injurious to the country, by unnecessarily increasing the burden which lunacy lays on it, and injurious also to some of those persons who exhibit the milder forms of mental unsoundness by subjecting them to discipline and restraints which they do not require, and which take away from the happiness they are capable of enjoying.

"We are of opinion that in these ways we can account for a considerable proportion of the increase which has taken place in the number of patients annually admitted into our Asylums, without accepting it as evidence of a correspondingly increased rate in the production of insanity. On the other hand, there is certainly nothing in the figures of Table X. to show that the creation of Asylum accommodation in Scotland has tended to diminish either the amount or the production of insanity. Probably no such result should be expected. It appears indeed that so sharply defined a product of insanity as suicide is not appreciably controlled in its frequency by the existence of Asylums, even in communities where these are conveniently situated for use, where fiscal and poor-law arrangements are good, and where medical advice is abun-

* Fifteenth Report of the Board. Report by Dr. Sibbald, Appendix F., p. 285.

dant. In London, for instance, if we take the proportion of suicides to 100,000 of the population for each of the 12 years from 1862 to 1873, we find that the figures fluctuate considerably but quite irregularly, and that there is no evidence in them of the working of any influence tending to cause a diminished frequency of suicide.

"It is impossible, nevertheless, to come to any other opinion than that insanity is to a large extent a preventable malady, and it appears to us that it is in the direction of preventing its occurrence, and not through the creation of institutions for its treatment, that any sensible diminution can be effected in its amount. Lunacy is always attended with some bodily defect or disorder, of which it may be regarded as one of the expressions or symptoms. We must therefore attempt to prevent its occurrence, in the same way as we attempt to prevent the occurrence of what are called ordinary bodily diseases; and if it be admitted that to a large extent preventable diseases exist among us in consequence of the ignorance of the people, it is clear that we can only convert the preventable into prevented by the removal of that ignorance through a sounder education. Much more, however, is necessary for this than ordinary scholastic training—more even than a mere discernment of the laws by which the universe is governed. Men must also be taught that it is their duty, and not merely their interest, to know those laws and to make them reverentially the rule of their conduct. In short, we can only hope that preventable insanity, like other preventable diseases, will be diminished in amount when the education of men is so conducted as to render them both intelligent and dutiful guardians of their own physical, intellectual, and moral health. To this, and not to any machinery, however good it may be, for the treatment and cure of the insanity which has actually arisen, can we reasonably look for a diminution in its amount.

"Table XI. shows the number of Sheriffs' orders granted for private and pauper patients during the year 1874, and the whole number granted for private patients during the ten years 1865-74. The Table also shows whether the orders were granted for the admission of patients into Private or into Public Asylums. In 26 instances the orders were merely granted for the transfer of patients from one Asylum to another."

The chief county in Scotland in which insanity is most prevalent is Argyllshire, with 46·4 lunatics to every 100,000 of the population. The Commissioners make some most interesting observations on the influence of the seasons on the various admissions, and on the deaths, which we here append:—

Month	Admissions, excluding Transfers			Recoveries			Deaths		
	Years 1865-1874			Years 1865-1874			Years 1865-1874		
	M.	F.	T.	M.	F.	T.	M.	F.	T.
January .	679	654	1,333	239	294	533	*253	*227	*480
February .	673	779	1,452	256	320	576	*254	*253	*507
March .	689	*817	1,506	289	*371	660	*241	208	*449
April .	*786	*848	*1,634	292	273	565	*230	*214	*444
May .	*757	*894	*1,651	285	358	643	*221	200	421
June .	*777	*904	*1,681	*347	347	*694	191	201	392
July .	*827	*868	*1,695	*377	*429	*806	188	*212	400
August .	686	*836	1,522	*337	*401	*738	160	205	365
September	*739	804	*1,543	*340	*412	*752	175	185	360
October .	665	782	1,447	*324	*370	*694	170	187	357
November.	646	741	1,387	238	351	589	208	207	415
December .	664	775	1,439	*343	*442	*785	*231	*230	*461
Totals .	8,588	9,702	18,290	3,667	4,368	8,035	2,522	2,529	5,051
Averages	716	808	1,524	306	364	670	210	211	421

* Every month which shows a number above the average has the sign * before it.

"As regards admissions, this Table shows that in each of the months of April, May, June, July, August,* and September, their number is considerably above the number in the different months of January, February, March, October, November, and December. This is true of both sexes. The admissions reach their maximum in July, the hottest month of the year. But they show a considerable rise in April, and go on rising steadily through May and June, till they reach their maximum in July, after which they fall with more or less steadiness from month to month till they reach their minimum in January.

"The occurrence of insanity is in few cases immediately followed by removal to an asylum. In most cases, indeed, a considerable interval elapses between the attack and the removal, which last must therefore stand in the relation of effect to some cause or causes which considerably precede it. In like manner, though probably in a much smaller degree, exacerbations of existing subdued states of insanity do not, as a rule, immediately involve removal to an asylum, some time being generally allowed to elapse before this step is resolved on as necessary. It is thus improbable that the maximum, which the admissions show in July, is an expression of what has occurred in that month, or that it can be due to July weather. Indeed, the fact that the number of admissions begins to decline rapidly in the months which immediately follow July, goes rather to show that the weather of that month has no special tendency to originate or intensify mental disorder. If such were the case the effect would, for the

* As regards men, August occupies a peculiar position. The great and sudden fall from July gave rise to the suspicion that some error existed in the figures, but no error has been detected.

reasons which we have just assigned, be seen following the cause after some appreciable interval. It is more probable that the high figures of June and July are the outcome of conditions which present themselves in the spring months. It appears, indeed, that some change takes place in January, February, and March, which converts a downward into an upward tendency of the figures, and that this change remains, and continues increasingly to exercise an influence in the same direction through April and May. The effects are prolonged in an intensified form through June and July, when conditions seem to be encountered of an opposite character, checking the progressive rise in the figures, and converting it into a steady fall through the months of August, September, October, November, and December, till we arrive at the minimum in January.

"We recognise, of course, that all this may occur without assuming that the results are in any way under the control of weather, and we are aware that at the very most we can only regard as under seasonal influences that small portion of the admissions which is represented by the range between the minimum and the maximum. There remains a steady mass of monthly admissions which cannot properly be associated with weather. It would greatly advance our knowledge of this question if the admissions of fresh cases of insanity, and of cases showing recent exacerbations, were tabulated separately from the admissions of old-standing cases.

"It has been shown that in the general population deaths from diseases of the nervous centres have their maxima in the period from January to May inclusive; and between this fact and the number of admissions into asylums in the different months of the year, the relation is evident and interesting. We do not venture, however, to do more here than point out the facts; and such remarks as we have made are intended rather to show how the interpretation of the facts should be sought than to give the interpretation.

"It is perhaps worthy of note that the progress of admissions into asylums from month to month over the year is substantially the same as the progress of deaths by suicide in the general community.

"This of course might be held to indicate the existence of some special intensity of mental disorder in the months which show a maximum of suicides, and not, as already argued, in the preceding months.

"Turning to the deaths in asylums, we find the maximum occurring in the cold months of December, January, February, March, and April, and the minimum in the warmer months of June, July, August, September, and October. Indeed the progress of the total mortality in asylums appears to obey the same influences as those which regulate the progress of deaths in the general population.

"In former reports we pointed out that, while the number of deaths of both sexes is greatest in winter, the tendency to death is not so much reduced in summer, and not so much increased in winter, in the case of females as in the case of males. This is probably the appearance in asylum populations of the fact now ascertained, that women in the general population succumb more readily than men to the diseases which are specially fatal in the hot months, and that, on the other

hand, men succumb more readily than women to the diseases which are specially fatal in the cold months. We are dealing here of course only with adults.

"The month of December 1874 was remarkable for great and prolonged cold, and the following figures show, as the seeming result, that a considerable increase of the deaths in asylums took place both in the month of December itself and in the succeeding month of January:—

	Winter of 1872-73	Winter of 1873-74	Winter of 1874-75
November . . .	39	37	33
December . . .	53	36	69
January . . .	48	44	59

"It has been frequently asserted to us by a careful observer that deaths from diarrhœa in asylums follow a course which is different from that of deaths caused by the same affection in the general community. In order to test this, we have prepared the following Table, which shows the deaths from diarrhœa in all the asylums of Scotland for the ten years 1864-1873, tabulated according to the fortnightly periods in which they occurred. We have also inserted in the same Table columns showing the mean fortnightly deaths from diarrhœa in London of persons above the age of 20*, for the five years 1869-1873, and the number of *attacks* of diarrhœa,† which occurred in the Montrose Asylum during each month for the eight years 1866-1873. The information necessary for filling up the last column was supplied to us by Dr. Howden.

"Though drawn from periods of considerable length, the absolute numbers in this Table are small, and therefore, in order to render their teaching more clear and sure, they have been treated according to the method recommended in such circumstances by Mr. Bloxam, which consists in assuming the number for any particular period to be the mean of the actual number and of the numbers for the corresponding periods immediately preceding and following. In other words, it imparts to the number for each period a portion of the characteristics of the periods which precede and follow.

"Before all the figures in each column which exceed the mean of that column, an asterisk is placed, so that the periods of maxima are readily seen."

The report before us contains a careful description of the present condition of public and private asylums, with remarks for their improvement when necessary. There appear to us to be many more single patients residing under private care in Scotland than in our own country, and we find that on the 1st of January of this year 103 houses were so licensed, the

* It was necessary to make this column deal only with persons above this age, in order to institute a fair comparison with the population of asylums, which consists almost entirely of persons above the age of twenty.

† Very few of these were of course fatal.

license enabling the proprietor to receive four persons of unsound mind in his house.

The condition of the patients under private care is most satisfactory.

During the year forty-three persons have availed themselves of the special clause in the Lunacy Act, and placed themselves under supervision in asylums of their own free will.

The report before us contains highly instructive matter, and carefully-drawn-up statistical reports, and is in our opinion one of the most careful descriptions of the condition of insanity, and of the various lunatic asylums, published by the Lunacy Board of Scotland.

ART. X.—NOTES ON ASYLUM SURGERY.

BY ROBERT LAWSON, M.B., Pathologist and Assistant Medical Officer,
West Riding Lunatic Asylum.

DURING the past month two surgical cases have occurred in the West Riding Asylum which are, in certain respects, instructive and interesting. The first was the removal of a darning needle from the abdominal parietes of a female patient, and the second the excision of a large mammary tumour of fibro-cystic structure.

The patient in the first case was admitted in March last. She suffered from simple melancholia, and had made repeated attempts to cut her throat. She was depressed on account of business embarrassments into which her husband had fallen, and had excessive feelings of regret for having taken a small sum of money from his till, for the use of her own sister. Her delusion was that if she were out of the way there would be nothing to prevent her husband's prosperity. When admitted she was low-spirited, owing to a vague feeling that everything was going wrong. She had a recent incision on the left side of the neck. Her physical health was fair, and she appeared to be at the menopause. In a month she was so much improved that she was employed in the kitchen, but had again to be sent to the wards on account of the occurrence of a certain amount of depression. In June she was much depressed, and showed great listlessness and want of appetite. She retained the obscure delusions which she had manifested on admission; and after a visit from her husband appears to have become much worse than she had formerly been. On the 18th of August she complained of pain in the left hypochondriac region, and on examination it was found that some sharp body was pointing underneath the skin at that part. On cutting down upon the spot a needle, measuring $3\frac{3}{4}$ inches in length and one-eighth of an inch thick, was readily removed. She stated that during the period of depression which has just been noted she swallowed a darning needle, a large piece of glass, and a portion of a bent knitting needle, in the expectation that they would occlude the windpipe and cause suffocation. The nurse remembered that at the time referred to the patient was refusing her food, but that the refusal appeared to arise more from defect of appetite or suicidal intent than on account of pain during or after swallowing. The patient herself observed that for

about twenty-four hours after swallowing the needle there was a sense of obstruction in the throat, followed by a strange sensation at the pit of the stomach which she described as a hungry feeling. This feeling also disappeared, and was followed by pain in the left side, which was increased by movement, and especially prevented her raising herself up when she had lain down in bed. When removed the needle presented appearances which led to the conclusion that it had passed through the cardiac end of the stomach wall and found its way directly into the abdominal parietes. The point was but little eroded, while the metal surrounding the eye was on one side completely eaten away, evidently on account of prolonged exposure to the action of gastric juice. This roughening of the posterior part of the needle caused a considerable amount of laceration during removal, but the small aperture closed in two or three days, and no threatenings of peritonitis were ever observed. The needle did not smell of faecal matter, and had no trace of digestion products on its roughened surface, so that the natural conclusion is that the needle had been lying entirely in the abdominal parietes for a considerable time.

The patient in the second case was also admitted in March 1875, and presented symptoms of subacute mania. She was a criminal, and at the expiry of her sentence was certified for admission into the asylum. She had numerous delusions and hallucinations, and was said to be at times violent. On examination it was found that she was exceedingly irrational and incoherent, morose and suspicious. She refused her food, and had to be fed with the stomach tube. She had hallucinations of hearing during the time of examination, and imagined that she heard the voice of a distant friend. A large fibro-cystic tumour was found to occupy the place of the left breast. It was not adherent to the subjacent textures. There was no retraction of the nipple, no enlargement of axillary glands, and no pain. The only discomfort caused by the tumour was a dragging sense of weight. The patient was somewhat sallow and very thin. She stated that the tumour had been growing for about three years, but her evidence was not reliable. In a week after admission the patient was somewhat better and had begun to take her food. In a month it was noted that she was losing flesh and that the tumour was undergoing no change. On August 18th a special examination was made, and it was determined that, as she was gradually becoming weaker, and as the growth was very rapidly increasing in size, it would be necessary to remove it.

Before removal it measured at the base, which was the smallest part of it, $22\frac{1}{2}$ inches in circumference. The skin

over the upper surface was very tensely stretched, that on the under surface was flaccid. The larger flap was consequently taken from below by means of a modified circular incision. There was a considerable amount of adhesion between the peripheral part of the tumour and the subcutaneous textures. The skin was exceedingly attenuated. On the under surface the growth was not to any extent adherent, but the pectoral muscle was much atrophied. On removal, the growth, including the fluid which escaped from cut cysts, was found to weigh rather more than 6lbs. In form it was lobulated, and on section exceedingly tough. Owing to the mental condition of the patient, it was impossible to employ the antiseptic system completely, but the skin surrounding the tumour was widely cleaned with carbolic lotion; the instruments, ligatures, &c. were steeped in carbolic oil, and the cavity left by enucleation of the tumour was thoroughly drenched with a solution of carbolic acid of the strength of 1 to 20.

The incision was dressed with carbolic oil of the same strength; and though the patient was so restless that two nurses were sometimes required to restrain her, the wound almost entirely healed by first intention. Around one ligature there was found at one or two dressings a small quantity of pus, and only at the extremities of the incision, where space was left for the draining away of discharge, was the healing action accomplished by granulations. From the date of the operation her appetite has increased, her pulse has gradually gained strength, and her mental condition has undergone at least temporary improvement. She has become more manageable, but is exceedingly mischievous. On the day after the operation she made several attempts to get out of bed, for the sake of annoying the attendants; yet, notwithstanding the disadvantages resulting from her frolicsomeness of disposition and her great prostration previous to the operation, the healing of the wound has advanced in every particular in the most advantageous manner possible. Perhaps it is not too much to say that this result is in no small measure due to the protection afforded by the use of a rough and ready form of the antiseptic system of treatment.

On microscopic examination the structure of the tumour was found to be made up of bundles of white fibres along with spindle-shaped cells. The fluid in the cysts was sero-purulent in character.

ART. XI.—LUNACY IN IRELAND.

THE Twenty-third Report of the District, Criminal, and Private Lunatic Asylums in Ireland for 1874 has been forwarded to us. It is replete with interesting matter relating to the condition of Lunacy and Lunatic Asylums in Ireland.

The following summary is given of the registered and un-registered lunatics during the year :—

	1872	1873
In Public Asylums	7,140	7,347
In Private do.	647	664
In Gaols	—	—
In Poorhouses	2,966	3,130
In Lucan, supported by Government	30	25
In Central Asylum for Criminal Lunatics,	175	160
Total number of registered insane	10,958	11,326
Insane at large	7,219	6,981
Total in Ireland	18,177	18,307

This table indicates an increase of registered lunatics at the close of 1873, as compared with the number at the same date in the preceding year.

The following remarks by the Commissioners are worthy of special notice :—

“The population of Ireland was returned at 5,493,547 on the 31st December, 1870, while upon the 31st December, 1872, it was calculated at 5,458,925, or a falling-off by emigration of 34,622 in the two years. For the purposes of a general approximation we shall assume, in the absence of the figures of the Census estimate for 1873, that a like ratio has been maintained, as among the sane and the insane; the total number of the latter in 1871 being 18,327, or about 3 in each thousand of the population; in 1872 it was 18,177, and in 1873, 18,303.

“Under these circumstances, and looking to the fluctuations in the amount of the inhabitants of different localities, and which must naturally influence the extent of mental disease in them, we are therefore inclined to believe that lunacy is not only not on the increase since 1871 in Ireland, but that when old and chronic patients now in asylums and elsewhere—who eight-and-twenty years ago constituted a portion of the percentages of the population of Ireland when it was nearly 2,000,000 greater than at present—shall have died off, a certain decrease is likely to result in the absolute number of our insane; while in England the advance within the same period of three years, in those ‘reputed to be of unsound mind,’ was 3,387, or from 58,640 to 62,027.

"No doubt an indulgence in the use of ardent spirits, and unfortunately of the most deleterious quality, is becoming more prevalent from day to day in this country, instigating its victims to the wildest acts of violence and depravity—maddening, without actual delusions, and terminating for the most part in epilepsy, or disease of the brain, but not in genuine lunacy.

"Melancholy, however, as may be the immediate consequences of drunkenness to those unceasingly addicted to it, the results are occasionally far more deplorable in regard to the offspring of inebriate parents, who are born imbecile, idiotic, mutes, or malformed, as we have known to be the case in two or even three members of the same family.

"We shall now analyse the general result of treatment in District Asylums during the year under review. On the 31st December, 1872, their inmates amounted to 7,140. In 1873, at the corresponding period, there were 7,347, or an increase of 207. The admissions during the years 1872 and 1873 respectively were 2,165 and 2,277, being an increase of 112 in the latter; the total discharges in 1872, 1,364—in 1873, 1,398, or 34 more. The total deaths show an increase of 27, as compared with those in the year 1872, and the escapes, 15 in '72, were 8 less in '73. As the daily average number under treatment in 1872 was 7,107, and in 1873, 7,254, making allowance for the increase, the percentage difference on any of the above items is scarcely perceptible. It is satisfactory, however, to observe that the recoveries, whether judged of by actual admissions or the number under treatment, fully sustain the previous favourable character of Irish District Asylums.

"The recoveries during the year 1873 amounted to 1,031—547 males and 487 females,—or nearly 11 per cent. upon the total (9,417) under treatment during the twelvemonth. The aggregate deaths in the same period were 665—368 males and 297 females—six resulting from accidental causes. The mortality—or 7·10 per cent. on the entire number in Asylums, and for the most part among the aged and infirm—is under the general average elsewhere.

"We would here, from a further experience, take the opportunity to repeat that a percentage upon total numbers is in every respect preferable, because practically more veritable, than one based upon a daily average of patients—unquestionably to one on admissions only, as is almost uniformly adopted in regard to cures; for the last method may involve the fallacy of supposing that the recoveries had taken place exclusively among the admissions, while it might happen that within a given, but exceptional, year there had been more cures than admissions, and in the event of a severe epidemic even deaths might chance to be in excess of both.

"Analysed according to the usual mode, the recoveries during the past twelve months in Irish Public Asylums would realise 45 per cent., and the improvements, as represented by discharged patients, 3—between both fully 58 per cent. on admissions.

"So far, then, as the important objects for which these institutions have been established are to be judged of by statistics, but above all by their affording a refuge to our fellow-creatures as places of judicious

treatment and safety, as well as the indirect but certain benefits accruing to society at large, by checking, as far as human means can, the propagation of mental disease, so hereditary in its character, their working during the year 1873 has been satisfactory and successful."

There are twenty-two District Asylums in Ireland, and the description of them in the Report contains particulars relating to the following heads:—

State of the Asylum.	Employments.	Expenditure, showing
Accommodation.	Amusements.	cost per head.
Admissions.	Religion.	Books and accounts.
Discharges.	Classification.	Attendance of Govern-
Deaths.	Diet.	nors.
Recoveries.	Officers.	General observations.

The condition of these Asylums appears, from the Report, to be satisfactory.

A considerable number of lunatics are confined in workhouses, and one-half of those so confined are idiots or epileptic imbeciles. Speaking of the condition of these inmates, the Commissioners say:—

"The various inmates here adverted to and visited by us in the course of the twelvemonth just expired, we are happy to report, are generally treated with great consideration, and their creature enjoyments, so far as the limited accommodation in workhouses admits of, humanely attended to. Indeed, for many years past, a growing liberality, encouraged by the Commissioners of the Local Government Board, has been observable, on the part of local boards. In many if not most unions the dietary is not only ample but of excellent quality, and where, from a paucity of those afflicted inmates, paid attendants are not employed to take charge of them, well-conducted and intelligent paupers are substituted. Occasionally, too, we find, when there are no regular wards for the classes in question, that imbeciles, harmless idiots, and epileptics are industriously occupied throughout the house, and sleep with the ordinary paupers. Twenty years ago it was different, but now more benevolence is exercised by sane inmates to their afflicted companions. The main deficiency consists in the want of day-room provision, and outdoor opportunities for air, exercise, and suitable occupations. To dwell further on workhouse arrangements as they affect the insane, would only involve a repetition of opinions fully expressed by us in antecedent reports. On our different visits to these institutions we point out any improvements on behalf of those who come within the sphere of our inspection, and which we feel bound to say, as a rule, are not overlooked."

We regret to find that there are, according to the returns made by the police, 6,981 persons mentally afflicted at large throughout the whole of Ireland, and out of this number 2,157

do not come within the category of pauper lunatics, the remainder (4,824) belonging to that class, and 1,800 are females. "In a moral, and equally so in a social, point of view, the hereditary character of insanity being considered, this latter important fact is well worthy of attention, and we consequently readvert to the subject."

The following interesting history is given of the life and death of the oldest criminal lunatic in Ireland, who died in the Central Criminal Asylum :—

"Amongst the deceased there was one to whose history we would readvert, in the instance of Captain S——, who died early in August. Taking the date of his offence into account, he was the oldest criminal lunatic in the kingdom. He was transferred to Dundrum, on its opening, from the Cork Asylum, of which he had been an inmate for nearly twenty-two years; having been acquitted so far back as 1829, on the ground of insanity, of the murder of seven men—the whole crew, in fact, with the exception of two boys, of a vessel then under his command, and on its return from Bermuda. There never existed a doubt as to the complete irresponsibility of the unfortunate man. Possessing originally a very decided character, but becoming the subject of mental disease, from continuous excitement and want of sleep for nearly a fortnight, he laboured under delusions as to an intended mutiny amongst his shipmates. After inducing them, in proof of their subordination, and of the absence of such intention, to allow themselves to be tied down with ropes on deck, in which position they lay for nearly an hour, the first mate showing the example; when approaching Cork harbour, with an iron bar, he deliberately murdered them in succession. After some time he recovered his reason in the District Asylum. He was remarkable for a uniform kindness of disposition towards his fellow-patients. His piety was also very conspicuous, being constantly engaged reading the Bible and religious works. Occasionally, however, he had violent relapses, preceded by a taciturnity unbroken for several days, save by quotations of an incoherent character, or the repetition of nautical phrases. For a few years before his death his memory and mental powers perceptibly declined. He died from senile decay, being considerably over 80 years of age. The brain, of small size, was found to be perfectly healthy, and the component parts in a normal proportion. The only morbid indication noticeable was a slight opacity of the membrane covering the middle and posterior portion of the organ, thus strongly indicating that grave mental affections can exist for a long series of years without any appreciable lesion of structure."

The following remarks are made by the Commissioners relative to the condition of Private Asylums :—

"The condition of Private Asylums in Ireland, as contrasted in the last and the year preceding, offers but little difference with regard to the aggregate number of patients in them. On the 31st of November, 1872, they amounted to 645—293 males and 352 females; at the like

date in 1873, to 305 males and 359 females. The admissions last year consisted of 88 males and 89 females, so far indicating the proximate rate of insanity between both sexes in the better classes of society. Taking the inmates of Private Asylums at the close of 1872, and those admitted in the subsequent twelvemonth, independent of Chancery patients and others elsewhere in private families, 822 were under treatment, and subject to our official inspection and examination. Of these 126 were discharged—27 males and 38 females as cured, and 18 males and 19 females improved; while 12 males and a like number of females were removed by their friends, still labouring under mental disease; one (a female) escaped, while 18 males and 13 females died—none, however, from accident, or suddenly.

“The recoveries speak favourably, being a full average on admissions and previous residents; at the same time that the mortality, not quite 4 per cent. on the whole under treatment, is little over that among the general public.

“With reference to the interior organisation of licensed houses for the mentally affected in this country, some institutions are materially in advance of others, much of course depending on the class of patients in them, and the salaries given for care and maintenance, which vary considerably; consequently, as may be expected, there is not a uniformity of appearance or of domestic comforts to be found in them either as to furniture, scale of dietary, mode of serving it, &c., &c.; and, indeed, it could not well be otherwise, when it is borne in mind that while in some establishments from £100 to £300 is allowed for patients, in others the stipends are not half so much—often, too, irregularly paid.

“Taken, however, one with another, they may reasonably be regarded as fulfilling a truly beneficial object towards the afflicted to be found in them, and who, were they located at home, or placed out with irresponsible parties, and officially unvisited, might in the first instance, through mistaken affection, and a concession to delusions which immediate relatives, parents, sisters, and brothers would not have the courage or judgment to contend with, or, in the second, from an opposite cause, neglect and too close confinement, have a disease permanently fixed on them. Were it not for the advantages derivable from regular asylum treatment, a wholesome isolation from friends, and a removal from previous causes of excitement—certain it is, and our experience supports the fact, and more from the operation of private than of public institutions for the insane, that the main probabilities of a restoration to health depends on early treatment, be it even attended with the abnegation of previous social comforts or enjoyments. That such abnegation should be as limited as possible, and for curative purposes alone, is one of the paramount duties of inspection; and, also, that at all times a willing ear should be afforded to the complaints and delusions even of the insane, who, too often neglected by relatives, look to us for sympathy and protection.

“On our frequent visits to Private Asylums, independent of inquiring into the actual state of mind of the individuals detained in them, we do not fail to advert to any noticeable deficiency or requirement, and to

suggest such improvements as in our estimation are calculated to benefit the inmates, an interference occasionally not uncalled for. At Citta-della, near Cork, the proprietor has just erected a commodious and well-devised building for twelve ladies, with flower-gardens in front, the apartments previously occupied by them being restricted in size; and at Lindeville, in the same county, Dr. Osborne, under our directions, has materially renovated his establishment for twenty-eight patients. The two private asylums near Armagh, Course Lodge and The Retreat, are now very satisfactorily conducted, without any pretensions, simply and efficiently. In the Queen's County the two licensed houses—one for gentlemen, the other for ladies, a mile distant from each other, and standing in a pleasing locality on detached and open grounds belonging to the Visiting Physician to the District Asylum, are alike well maintained in every respect; while many of those in the vicinity of Dublin are in a very creditable state, as we have stated in previous reports. Within the past eighteen months, the President of the College of Physicians has expended a large sum of money, not only in structural enlargements and alterations, but in improving the gardens and extensive pleasure-grounds attached to both his asylums, containing, between the males and females, fifty-two inmates. Besides private houses, for which licences under the statute are annually taken out, there are three important institutions of a mixed character—Swift's or St. Patrick's Hospital; The Retreat, belonging to the Society of Friends; and Richmond Retreat, conducted by a religious community, and for females only: all these, however, make no distinction whatever of creed in their admissions. As they accommodate not only paying patients, but others free on the foundations, no licence is required of them under the statute. We have every reason to approve of the management of these institutions. The Stewart Asylum for Imbecile and Idiot Children is still occupied at Lucan Spa; the commodious and in every respect well-suited residence intended for them, and with ample extent of land around it, not being as yet quite habitable, or sufficiently furnished.

“Looking to the general working of private licensed houses in this country during the past year, we are gratified at being enabled to report that not a single cause of complaint sufficient to need an official inquiry was preferred to the Executive or to the Inspectors; neither was there an instance of improper detention. Some few patients were admitted on certificates not fully prepared, but the irregularities, on being noted, were speedily rectified. From the frequency of our inspections, abuses of the Act could not well take place, the provisions of which, as a rule, are carefully attended to; the proprietors of asylums being fully sensible, and none more so, that the success of their respective houses depends on a good name, to which kindness towards the afflicted under their care is essential.

“Before concluding our observations, we would beg to state that the 5th & 6th Victoria, cap. 123, by which alone private asylums are regulated in Ireland, is not so comprehensive in its provisions as could be desired. So far as interior supervision by the inspectors is concerned, there exist legitimate powers at command; but in regard to the right of detention, save in the case of lunatics under the Court of

Chancery, none is authorised against common law. Hence the owner of a Private Asylum is liable at any moment to an action for false imprisonment in this country, on the plea of harbouring a paid-for lunatic, however marked his malady. Indeed the same principle, if it be one, holds good in our public institutions for the insane, if the party detained is not deposed to as being absolutely dangerous to himself or others. The anomaly was sustained in a trial here, when an acknowledged maniac obtained substantial damages against the Governors of the Metropolitan District Asylum, at a trial in the Court of Queen's Bench.

"Again, there is no provision in Ireland, as in England, for allowing convalescents, out on a temporary probation, to be protected during its continuance from incidental consequences. Nothing is occasionally more practically useful than such an opportunity to test the mind prior to absolute freedom being accorded. Neither in case of an escape is there a legal power of capture or recovery. These deficiencies, from the result of experience, we should wish to see remedied, and especially on behalf of the insane themselves, and the protection of property. It appears to us most desirable that in certain doubtful cases the inspectors should have power to allow convalescents abroad, under cautious restrictions in each case, and after a personal examination, to verify cures.

"The inmates of an asylum may appear in it, as it were, suspiciously reasonable for weeks, or even months, when in a less number of days, free to act, and uncontrolled by advice, they become palpable lunatics, often, too, to the serious inconvenience of their relatives, and to their own detriment."

CENTRAL ASYLUM, DUNDRUM.

"The Central Asylum for insane persons charged with offences in Ireland, and capable of accommodating 120 males and 65 females, exhibits a decrease in the number of its inmates during the past year. On the 1st of January, 1873, it contained 175 patients. During the year 16 were admitted, 21 were discharged, and there were 9 deaths, leaving, on the 31st December, 121 males and 39 females, or a total of 160, as against 175 on the 1st of January. It will be observed that, though the male side is generally occupied to its limit, there is an ample margin for the reception of females; but, in order to render the Institution equal to the requirements of the country, we have from its opening deemed it advisable to exercise a selective discretion, by limiting the number of admissions to individuals who appear to us to be suitable cases, either from the grave character of the offences with which they were charged, or, if such offences were of a minor nature, whose antecedent circumstances were indicative of dangerous tendencies. This restriction upon the number of admissions, without interfering with the legitimate objects of the Institution, has been attended with a considerable saving to the Treasury.

"The inmates of the Dundrum Asylum admit of two divisions. Within the first we would include individuals—fortunately, the most numerous—who, while labouring under insanity, have committed

offences more or less serious. The essential point to be remembered with regard to these sufferers is, that the disease itself, depriving their acts of legal or moral responsibility, condones the criminality. We find from experience that such patients are not, as a general rule, more difficult of management than the inmates of ordinary asylums. Within the second we would enumerate those persons who, subsequent to conviction, either while resident in prisons or gaols, or located at Spike Island, and undergoing terms of imprisonment or penal servitude, when certified to have become insane, are transferred to the Central Asylum. In their regard the sequence of events has been punishment supervening upon crime, with the superadded complication of insanity, whether real or assumed. It is a remarkable fact that persons of this class not unfrequently bring with them to the Asylum the same obstinacy, impatience of restraint, and perversity of feeling, which had rendered them unmanageable under prison discipline. Sometimes the existence of the alleged insanity in these individuals is really very doubtful—their persistent disregard of discipline, their unwillingness to profit by the lessons of experience, and their mischievous disposition having led to the conclusion that their conduct must be attributable to a mental or moral obliquity, although they betray no intellectual delusions; and, indeed, we can hardly be surprised if, under these circumstances, an opinion should elsewhere be entertained that such impracticables were fit subjects for asylum treatment. Their admission, however, to Dundrum in some instances constitute an unpleasant and unprofitable addition to the ordinary inmates of the institution."

In the copious Appendices to the Report there is a vast mass of carefully-arranged statistics, from which we extract a few details.

The total number of patients that have been treated during the year 1873 in District Asylums is 5,119 males, and 4,298 females; of this number, 547 males and 484 females were discharged recovered, and 368 males and 297 females have died during the year. The causes of death are worthy of note:—

	M.	F.	Total.
Abdominal affections	42	40	82
Cerebral and cerebro-spinal affections	91	55	146
Thoracic affections	104	95	199
Heart disease	15	15	30
Debility and old age	92	72	164
Fever and other diseases . .	16	19	35
Accidents, violence, or suicide .	8	1	9

It will be remarked how very disproportionate are the male and female deaths from cerebral and spinal diseases.

An instructive table is given, showing the educational condition of the patients:—

	M.	F.	Total.
Well-educated	272	203	475
Can read and write well	759	610	1,369
Can read and write indifferently	1,059	609	1,668
Can read only.	672	716	1,388
Cannot read or write	963	948	1,911
Unknown	242	294	536

On investigation of the trades of the inmates of the District Asylums, we find that a very large proportion belonged to the agricultural class.

We must draw the special attention of our readers to an elaborate table, in which is given the supposed causes, both moral and physical, of the insanity; and by analysis of it we have drawn up the following table:—

MORAL CAUSES:—			
	M.	F.	Total.
Poverty and reverse of fortune	159	115	274
Grief, fear, and anxiety	208	314	522
Love, jealousy, and seduction	95	131	226
Domestic afflictions and quarrels	85	105	190
Religious excitement	119	130	249
Mental excitement, study	46	26	72
Illtreatment	11	26	37
Pride	12	13	25
Anger	3	8	11
	<hr/> 738	<hr/> 868	<hr/> 1,606

PHYSICAL CAUSES:—			
Intemperance and irregular living	345	97	442
Cerebral disease	193	134	327
Congenital idiocy, &c.	106	79	185
Sunstroke, effects of climate	135	18	153
Febrile affection	45	46	91
Bodily diseases and injuries	225	157	382
Abuse of medicine	8	4	12
Sedentary habits	17	1	18
	<hr/> 1,074	<hr/> 536	<hr/> 1,610

These tables refer to 7,347 lunatics in asylums on 31st Dec., 1873, and, besides the before-enumerated causes, 551 male and 629 females are recorded as *hereditary*, and in 1,604 males and 1,547 females no cause is attributed; thus, in more than half of the patients, we are ignorant of the cause of their malady. The physical and moral causes are very equally divided, and of the former intemperance is one of the chief, whilst amongst the latter may be mentioned grief and anxiety.

Many more interesting statistical tables are given, and the New Code of Privy Council Regulations concludes the Report, which is worth careful study and perusal.

ART. XII.—LUNACY IN THE COMMONWEALTH OF MASSACHUSETTS.

IN our last number we gave a few particulars relative to Insanity in Massachusetts, gathered chiefly from an imperfect report of the State Board. Through the courtesy of Dr. Allen, Commissioner in Lunacy to the Commonwealth of Massachusetts, we have been favoured with the official report of the Commissioners of Lunacy for that State, which appeared at the beginning of this year.

At the present time there are 3,077 persons of unsound mind residing in Massachusetts, out of a population of 1,630,598, whereas in 1870, the population then being 1,457,351, the number of lunatics registered was 2,662, showing a difference of 415 in four years; and it appears to us that this increase of lunacy in the State is not compatible with the increase of the population. Between the years 1850 and 1870 there was an increase of 982 in the number of the insane, or 58·4 per cent.

With regard to the increase of insanity, the Commissioners make the following remarks:—

INCREASE OF INSANITY.

That there would be an increase of insanity, corresponding to that of population, has been generally admitted; but that it is actually increasing in a ratio greater than that, has been considered very doubtful. On this point, however, there has been a difference of opinion among those who might be considered very good judges. Last year a distinguished lecturer, in Boston, declared, in a public address, "that insanity is on the increase among us;" to which a well-known writer upon this subject replied, saying, "This is mere assumption." Says one of our leading superintendents, in his Report for 1873, "If mental disorders are not increased in a ratio greater than the increase of population, a proposition that has not been proved, and the truth of which is exceedingly doubtful," etc. The superintendent of another hospital, in his report for the same year, after stating that the average admissions for the last four years into his institution had been over 400 each year, against 243 average admissions annually for the four previous years, remarks: "As something of the same advance, for years, has been observed in the other two State hospitals, we can hardly avoid the conclusion that there is a decided increase of insanity in our midst, an increase out of proportion to the natural growth of population."

A careful inspection of the constantly increasing number of admissions, for years, into our lunatic hospitals, would surely convey the impression that there was a decided increase of insanity in our

State; but then, so many of these admissions are for a second or third time, while others are mere transfers, such an inspection would not afford very positive evidence in the matter. The fact that, for years, all our provisions for the insane, notwithstanding great enlargements from time to time, have been and are still very crowded, would seem to indicate that there must be a decided increase of insanity. A brief sketch of these changes or increased accommodations may aid us in obtaining a better knowledge of this increase.

In 1818 the McLean Asylum was established, and in 1832 contained 64 inmates, at which time the State Hospital at Worcester was built, for 120 patients. This was as large a number as it was then supposed would need such accommodation. In 1836-37 two wings were added, to accommodate one hundred more; and in 1842 two more wings were added, to provide for another hundred. In 1851 the Worcester Hospital had 450 patients; the McLean, 200; the Boston City Lunatic Hospital, 204; the receptacles at Ipswich and Cambridge had 115 insane; besides these, many were confined in jails and almshouses. On account of the crowded state of these institutions, the Legislature, in May 1851, passed an Act to establish another hospital, which was opened at Taunton in 1854, with over 300 admissions the first year. Such was the pressure on the institutions that, in 1855, provision was made for another lunatic hospital. This was opened at Northampton in 1858; and these two hospitals, built near the same time, with provision for 600 new patients, seemed to meet the demand for nearly ten years. In 1866 (and for several years) the three State Hospitals were so crowded that an asylum, connected with the State Almshouse at Tewksbury, was opened for the chronic insane. This, ultimately, made provision for 300. For some years the Taunton Hospital has been so crowded that two large wings have just been added, making provision in all for 500 or 600 patients. Worcester, on account of its crowded state, and the pressure of the city upon its premises, is erecting a new hospital to accommodate 500 or 600. Besides these changes, the State is erecting at Danvers a large new hospital, making provision for 500 or more patients. And when all these accommodations are complete, providing for some 800 or 1,000 new patients, they will at once be all occupied, and more room will soon be demanded. From the extended provision made from time to time for the insane, it would certainly seem as though there had been a very decided increase in numbers, above the ratio that might have been expected.

It is not the exact increase in numbers which we here aim to discover, but the *relative increase of insanity compared with that of population*. A definite enquiry made at the proper sources in all the cities and towns in the Commonwealth, as was done by the Lunacy Commission of 1854, might give us a very correct knowledge of the present number and distribution of the insane, though it would throw but little light on its increase or its causes, as connected with the changes of population. The census affords the only feasible medium of enquiry in this direction. The censuses are taken at different periods, under similar directions, conditions, and methods, and must yield results each time of comparatively equal value, the defects of each period being much the same in amount and kind. The value of their

results consists not so much in absolute statements, as in enabling us to make comparisons as to the relation which the insane sustain at different periods to the changes in population.

We cite the United States and State Census taken at five different periods—viz., 1850, 1855, 1860, 1865, and 1870. Included in this period there are two important phases—the late war, and foreign immigration—which call for special notice, not merely in their effect upon population, but in their relations to the insane. For the sake of convenience we present these tables together; and though taken by different agents, there are no marked discrepancies, but their results as a whole help to explain and confirm each other.

The Commissioners state that the increase of insanity may arise from two sources:—

First.—Looking at the foreign element, more especially the Irish, it may arise from the change in organisation and character, consequent upon migrating from the equable climate, outdoor exercise, pure air, and simple habits of life enjoyed in their native land. Here the not unfrequent disappointments, the different style of living, the increased habits of intemperance, working more indoors, living in tenements badly ventilated, etc., etc.—all these causes are peculiarly calculated to impair health, disturb the nervous system, and in many cases produce decided insanity. Moreover, this element in our population is largely increasing.

Second.—A change from a vigorous, well-balanced organisation to an undue predominance of the nervous temperament is gradually taking place in our New England people. The brain is being developed altogether too much at the expense of the body. The educational pressure on the young, to the neglect of physical exercise, the increasing artificial and unnatural habits of living, the great excitement and competition in business,—these and other causes are multiplying nervous diseases, especially of the brain, and disturbances of the mind, many of which must result in mental derangement. Then it must be borne in mind, that the evils resulting from the above-mentioned causes may be propagated by the laws of inheritance, in an aggravated and intensified form.

The fact, that for twenty years there has been a decided increase of insanity in our State, disproportionate to the increase of population, is clearly demonstrated, we believe, by the tables and comparisons here presented; but neither time nor space will allow, at the present time, an enquiry in what particular classes this increased insanity has appeared, or what were the precise causes that produced it. Judging by the history of facts, and the various influences now in operation, we have reason to apprehend a still greater increase of insanity, unless

active measures are taken to arrest its progress by enlightening the public as to its causes.

Some valuable remarks are made as to the difference between acute and chronic insanity. The causes are often complex and latent, and we are unable to determine when and how the disease originated, and consequently it is sometimes a difficult thing to state whether we have an acute or chronic malady under our observation. The question naturally arises, at what period a disease may be considered to have passed from the acute to the chronic stage, and in no disease is this point more complicated than in insanity. When the disease has definitely settled into a chronic condition, it is almost hopeless to attempt a cure.

Dr. Allen says:—"If the proper treatment can be applied in its first attack or stage, it is estimated by some that, taking all cases as they arise, from 70 to 80 per cent. can be cured, and others estimate the rate still higher; but if not treated at all, or attempted unsuccessfully, till the disease passes into a chronic state, it is found, as a general rule, that not more than 10 per cent. ever recover," thus showing the great importance of treating the malady in the incubatory stage. This, we are sorry to say, in our own country is not always recognised; the friends refusing to admit the real condition of the patient until the symptoms have become rapidly developed, and consequently, during the incubatory stage, no treatment has been adopted as a means of checking the rapid advances of the malady, and frequently the disease has assumed a chronic form before admission into an asylum. The chief recoveries occur in persons in whom the premonitory symptoms have been recognised, and active treatment immediately resorted to.

One of the chief provisions required by the Lunacy Act in Massachusetts is that the Commissioners' Report should give the various methods for treatment adopted in the State. This clause is an important one, and we regret there is no such provision in our own Act.

We consider the remarks on treatment extremely valuable, and we here append them:—

TREATMENT OF THE INSANE.

The Act establishing this Commission enjoins upon it an enquiry into the treatment of the insane. This may be interpreted in different ways; it may refer to medical, sanitary, or personal treatment. In this enquiry it may not, perhaps, be out of place to notice briefly each of these topics.

The administering of medicine constitutes a very important agency in the cure of the insane. By some the value of this agency would be

estimated much higher than by others. In the establishment of hospitals the use of medicine has always assumed paramount importance. Formerly, medicine was deemed much more efficacious, and its use more essential, than of late years. It was regarded, in fact, as the chief agency in curing the insane; whereas of late, the moral, the sanitary and other outward agencies have assumed relatively greater importance. It is found that all those influences that appeal to the laws of the mind have a powerful tendency to the restoration of health. It is well known that there has been great improvement in the general practice of medicine as to the use of drugs, both in quality and quantity. It is to be presumed that all the most improved methods of compounding and administering medicine to the sick are to be found in our lunatic hospitals. But in examining the reports of these institutions, and by enquiry of their superintendents, we find a great difference among them in the quantity of medicine used. In the item of expenditure for medicine in the various reports, it will be seen that for a series of years twice or three times as much medicine is purchased for the same number of patients by some institutions as by others. In one or two of the institutions this expenditure, as reported, is five or six times as large as in the others. It may be said, we are aware, that the item of expense is not a fair or correct criterion as to the wise administration of medicine, as the patients in the hospitals differ so widely. It is well known that, among the best physicians in private practice, a great difference exists in the quantity of medicine used. The same difference may exist in hospital practice. Here the medical attendants are sole judges, without interference on the part of patients or their friends. Whether there is over medication, or a neglect in the efficient use of medicine in particular cases, are questions beyond the scope of our present enquiry. If medical skill and experience—if a wise discriminating use of drugs—if close attention to and watchfulness of their effects—are required anywhere, it is surely in the medical treatment of insane persons. The highest skill, the best experience, and the greatest wisdom to be found in the profession should by all means here be brought into requisition.

Connected with this topic the inquiry arises, Can a superintendent, with one or two assistants, treat properly four or five hundred sick people? In private practice, a physician could not begin to do justice to a quarter part of this number. This constitutes a serious objection to large hospitals. In all these institutions, it is found that there must be one superintending mind; there must be in every department personal responsibility resting upon some one individual. If the superintendent is to act as steward,—is to have charge of all the repairs, improvements, and finances of the institution,—is to have his mind charged with a multitude of other duties too numerous to mention, how can he properly examine, prescribe for, and carefully watch, from day to day, very many patients? It is true he may have good assistants, and there may be large numbers in our lunatic hospitals who really need no medical treatment; yet, with the cares, labours, and responsibilities put upon him, can he do justice to all such patients as are very sick, or in the first stages of the disease? If there must be lack of attention or neglect of duty anywhere, it certainly should not be in the medical care of the insane.

Another agency in the treatment of the insane, in some respects more important than the use of drugs, certainly so to large numbers of them, is that of sanitary influences. Once the value and efficiency of these agencies were imperfectly understood; yet nowhere are they so important as in the case of the insane, where great numbers, diseased both in body and mind, are brought into close contact. Good air, pure water, cleanliness, and proper exercise are here indispensable. Within a few years great improvements in these respects have been made in all our hospitals, but there is room for still more. Most serious defects, under these heads, might be pointed out in each of our institutions, in some more than others; but we cannot at the present time enter into detail. One single point should be mentioned. We found the lower halls at the Worcester Hospital, several in the older portions at Taunton and South Boston, badly ventilated; but by the changes going on and in prospect, these evils, it is expected will be remedied.

There is one other point, however, that calls for special notice—that is, the *law of exercise*, applicable to the mind as well as the body. As a curative agency for the insane, and a conservator of health, its value and importance cannot be overestimated. Much may be accomplished in this way within the walls of the institution, but more outside. Useful employment of various kinds may be found for a portion of the females within and about the establishment, while others should be made to seek exercise in verandahs and airing-courts, as well as in walks and rides. If the practice of gymnastics, with some of the more simple apparatus and appliances, could be employed by both sexes, it would conduce greatly to their physical and mental health. In the case of males, exercise can be provided to some extent within the institution, but far better and more wholesome without, in doing chores, in taking care of stock, in making repairs and improvements, in garden and farm work, &c. Though much has been effected in these directions, there is abundant room for further improvement. No kind of exercise is so wholesome as work in the garden or on the farm, and the more this can be extended the better. The introduction of some suitable mechanical work on a larger scale would, as it seems to us, prove an admirable addition to the remedial resources of such institutions. The utility or profit of the work would be a minor consideration, compared with its sanitary influence.

Inasmuch as insanity is a disease affecting the mind, and inasmuch as all mental exercises have a powerful influence upon the physical system, it is found that, in order to treat insanity successfully, we must summon to our aid all those agencies that tend to produce a normal healthy action of the mind. Within ten or twenty years there has been great improvement in this respect.

There is, among the insane, such an absorption or introversion of thought and feeling on themselves, such an overwhelming tendency for all their mental faculties to run in particular grooves or channels, accompanied generally with great depression of spirits, that in order to break up this spell or incubus, and effect a change, there arises a necessity for resorting to those means, which serve to draw the mind away from itself and bring before it new scenes and objects. This is done in a great variety of ways, by amusements, such as billiards, games, plays, excursions, rides,

together with lectures, music, pictures, reading, religious exercises, etc. All these measures, when properly employed, have a powerful tendency to restore the mind to a normal and healthy action. They operate in harmony with the laws both of mind and body; and the most skilful and successful managers of the insane resort more and more to these agencies. It is found that the more constantly the minds of the insane can be occupied with agreeable and pleasant employments and associations, the greater are their chances of recovery. In no one way, nor in any department for treating the insane, has so great improvement been made as in the use of these agencies. And the more correctly and thoroughly we understand the laws of mind as based upon the functions of the brain, both in a normal and abnormal state, the more successfully will they be applied to cure the derangements both of body and mind. But it is almost superfluous to say that, as in the past there has been constant improvement in the use and adjustment of such appliances and remedies, there is yet room for and hope of still greater.

THE QUESTION OF PERSONAL TREATMENT

possesses points of great interest. It is unnecessary to discuss the importance of kind gentle treatment to persons in health; but its influence upon the insane is so powerful that we cannot find language strong enough to express its value. The very nature of their disease makes them morbidly sensitive and generally suspicious. They are governed very much by first impressions and outside influences. While deprived of reason, or the use of those higher faculties designed for our guidance, they yield readily to the impulses of will, feeling, taste, fancy, etc., as affected by persons or circumstances around them. Now in this morbid, sensitive, uncontrolled state of mind, the manner, talk, gesture, or smile of those especially in charge of the insane has a powerful influence. It may do more, in many cases, to break up and cure their derangement than it is possible for medicine or any sanitary agency to do. Hence the importance that all having charge of the insane, whether physicians, attendants, or nurses, should at all times take special pains to treat them with great kindness and tenderness. No assistant or attendant should ever be employed, without he possesses qualifications particularly adapted to this business. To discharge successfully the duties here incumbent requires a peculiar combination of qualities. Among these may be mentioned an inexhaustible share of patience and goodnature, a cultivated, well-balanced mind, firm and decided, without harshness or severity, always cheerful and persevering. Considering the importance of this subject in hospital treatment, we believe persons should be trained expressly for this business, and should receive such compensation as will render the situations more permanent than they usually are. In this way far more good might be accomplished, and less complaint would be heard from patients or their friends. Lunatic hospitals have probably suffered in reputation more from this source than from any other.

Perhaps under the head of "Treatment of the Insane," the question of "Diet," specified in the law creating this Commission, should receive

some notice. Much might be said on this subject; but to do it justice, one should visit the hospitals at meal-hours, and carefully examine into the kinds, qualities, quantity of food, manner of cooking, etc., and enquire whether each inmate obtained sufficient food, or what was best adapted to his wants. All this would require far more time and labour than our prescribed limits allow. Each of the hospitals has a regular "Diet Table," which is followed, we are informed, with much uniformity. Those tables have been prepared with great care, and improved, from time to time, as experience and observation dictated. Each of these tables specifies meat always in some form at dinner, and about half the time at breakfast. A great variety of food is presented in these tables, not intended, of course, for every meal or day, but extending through the week. The general character of the diet would seem to be plain, nutritious, wholesome, and substantial, interspersed with pastry, dessert, condiments, fruit, milk, etc. The sick have a prescribed diet adapted to their wants. Judging by these tables, it would seem as though the inmates of these hospitals could have no just ground of complaint for the want of variety in their food; and it is generally understood that the cooking in all our large institutions is superintended by experienced persons. Whatever other complaints have been made against our lunatic hospitals, scarce any have come to our knowledge on the ground of insufficient or unwholesome food. It has been maintained that the insane, on account of the excited and disturbed state of the brain and nervous system, require more nutritious food than other people; and from extended observation and enquiry, we are satisfied that the dependent class, particularly of the insane in our public institutions, fare better than they would do outside.

RESTRAINT OF THE INSANE, FREEDOM ALLOWED, ETC.

On no one point are people so sensitive as on that of *personal* liberty. The idea of being confined by bolts and bars shocks one's sensibilities. The thought that liberty is to be taken from us—that the freedom, the control of our own persons must be surrendered to others—produces anything but agreeable or pleasant impressions. This is perfectly natural; it accords with our best instincts of self-respect and self-government. And in the case of the insane the effect of such a change may aggravate or increase the very derangement out of which grew this necessity, and also serve as a most grievous hindrance to the restoration of health and sanity. On account of this great change in surrendering up one's personal rights to which the insane must submit, special pains should be taken, that this confinement and restraint should at first, and all through the treatment, be as light and inoffensive as possible; and all the freedom compatible with safety to the patient and others should, at all times and on all occasions, be allowed. In respect to this matter of the personal liberty of the insane, great changes for the better have been made within a short period, both in Europe and our own country. The insane in our lunatic hospitals are obtaining every year more and more freedom by use of halls, yards, courts, and by outdoor exercises. But whenever there is danger or positive evidence that a patient will injure himself,

or others, he must be confined in a room by himself, or in some way his limbs or person be restrained so as to prevent such injury. Both in the manner and frequency of employing this confinement or restraint, great care and discrimination should be exercised. Neither should such confinement or restraint be continued longer than is absolutely necessary. No pain or suffering should by this means be inflicted upon the body. Special care, too, should be taken that no injury occurs by this confinement to the health, and that it should interfere as little as possible with any of those agencies intended for the permanent recovery of the insane. In all our large lunatic hospitals cases are constantly occurring where seclusion or restraint is absolutely necessary,—sometimes temporarily, and at others more permanently. In our visits to these institutions we have made careful enquiry on this point, and have been surprised that these cases of confinement or restraint were so few, and that it was applied with so little apparent injury to body or mind. By actual count, the number thus confined or restrained on our visits ranged between five and ten.

To all the insane who can go outside of the walls of the institution, freedom should be allowed as far as possible. Let them go, for work or pleasure, in small or large companies; let them ride or walk; they should by all means be encouraged and urged to go. In these outside exercises let them be put upon their honour—upon their good behaviour. Should one occasionally escape, it does but little injury; whereas great numbers are essentially benefited, and, perhaps, cured for life. There are, however, two modes of using force or restraint which demand special notice. *First*.—In case an insane person is disobedient or disorderly, and requires correcting by the laying on of hands, this correction should always be performed without harshness or violence, or showing ill-temper. Many complaints have been made by patients against attendants in lunatic hospitals for rough and abusive treatment of their persons, and we apprehend that, in some instances, just grounds have existed for such complaints. *Second*.—The other mode of using force is in confining the insane, as a mode of correction or punishment for some misconduct, or for refusing to work, etc., in cells or rooms, sometimes dark, cold, and unwholesome, and keeping them in the meantime upon scanty fare. We question whether this mode of correcting the insane can be justified by any principles of justice, or by any advantages that may accrue from such a course. In fact, it is a violation of the laws of the State. Several cases, where parties refusing to work were confined, for a shorter or longer time, in cells, lately occurred in one institution: but as, upon expostulation, the procedure was immediately stopped, with the assurance that it should not be repeated, any further comment is deemed unnecessary.

Our special attention is drawn to the evil resulting from allowing patients to be too frequently visited by their friends and relations. The physician has no motive in prohibiting their visits. He is perfectly aware of the great mischief so often following an injudicious visit made to a person suffering from acute insanity. If, however, the friends

are obstinate, and still insist on seeing the inmate, all responsibility will rest with them for any aggravation of the disease.

We are told that several hundred cases of insanity in workhouses and private families, are really only fit for asylums.

There are at the present time five Private Asylums in the State. The oldest of these was established thirty years ago; but with the yearly increase of insanity, more accommodation will soon have to be provided, the remainder of the lunatics being at present confined in hospitals. We regret very much to find that, according to the present Lunacy Law, no provision is made for an official visitation of Private Asylums.

Dr. Allen makes various suggestions for the management and improvement of hospitals, and we congratulate him upon his earnest labours in the field of Psychology. Notwithstanding his having been deprived of the valuable services of his coadjutor, W. Phillips, Esq., he has given us a most valuable Report.

REVIEWS.

1. *West Riding Lunatic Asylum Reports*, Vol. iv. Edited by
J. CRICHTON BROWNE, M.D.

THE volume before us contains many articles replete with useful information.

The first article is an address delivered at the Annual Medical Conversazione held at the West Riding Asylum. Dr. Carpenter, who delivered it, drew the attention of his audience to the psychological import of Dr. Ferrier's experimental investigations into the functions of the brain, and, at the request of the editor of these reports, he consented to its appearance in print.

We are told that the chief experiments relating to the nervous system have been made by British investigators, and Sir Charles Bell, Dr. Marshall Hall, Dr. Waller, Dr. Brown-Séquard, and Dr. Ferrier, are here mentioned. Many more names could be added of persons equally distinguished in their investigations on the nervous system.

Dr. Carpenter, after carefully describing the difference between the tubular and cellular components of the nervous system, and giving a pathological description of nervous tissue, passes on to consider nervous force and activity, and a comparison between human and comparative pathology. Dr. Carpenter has formed the following opinions relative to Dr. Ferrier's investigation into the functions of the brain:—

1st. That the cerebrum has a *reflex action* of its own, which manifests itself in the production of co-ordinated movements.

2nd. That these movements are called forth, not by the mental states themselves, but by cerebral changes which are their *physical antecedents*.

3rd. That we are able to draw from these experimental researches a more definite *rationale* as to the automatic performance in man of movements which originally proceeded from intentional direction.

4th. That the cerebrum does not act immediately upon the motor nerves, but that it plays downwards on the motor centres contained within the axial cord.

5th. That Dr. Ferrier's experiments throw great light on the "crossed" action of the several ganglionic centres contained within the skull.

6th and lastly. Dr. Carpenter concludes: "I consider, therefore, that the results of Dr. Ferrier's experiments encourage the belief that by the combination of anatomical and developmental study, of experimental enquiry, and of pathological observation, much light may be thrown on the functions, not merely of the several ganglionic centres which are aggregated in the human brain, but on those of the different parts of the great 'hemispherical ganglia' formed by the convoluted layer of the cerebrum."

An interesting clinical case is given by Dr. Hughlings Jackson, describing a remarkable case of recovery from "double optic neuritis." This is accompanied by an excellent diagram. We quite agree with

Dr. Jackson that the ophthalmoscope is a most valuable aid in the diagnosis of nervous affections.

Pathological Illustrations of Brain Function, by David Ferrier, M.D.—The author of this paper presents to us a number of cases illustrative of cerebral lesion, to which are appended many post-mortem examinations. Special attention is drawn to the average thickness and density of the skull, the adherence and nonadherence of the dura mater, and the contents of the sinuses, with reference to the fluidity or solidity of the blood contained therein, and wasting of convolutions. We are told that it is only by accurate records and observation, which are alone arrived at by careful investigations of the cadaver in the dead-house, that any approach to the localisation of brain function can be attempted. Dr. Ferrier is entitled to the warmest encomium for this careful paper and for his earnest endeavours to illustrate cerebral pathology.

The Urinology of General Paralysis. John Merson, M.D.—After a few remarks upon the importance of a careful analysis of the urine in all diseases, a short summary is given of the excess and deficiency of the phosphates in cases of acute mania, dementia, and the third stage of general paralysis. We are told that a plus quantity of phosphate exists in a paroxysm of acute mania and a minus quantity in cases of cerebral exhaustion. These conclusions were arrived at by Dr. Beale and the late Dr. Sutherland, but to which the writer of this paper takes exception. He maintains that the cases from which these experiments were deduced were insufficient to justify the opinions formed.

A number of valuable tables are given, describing the specific gravity, the quantity of urine passed during the twenty-four hours, the amount of urea, NaA , $\text{H}_3\text{P}_2\text{O}_8$, H_2SO_3 , excreted either under the administration of Calabar bean or without it. The results of the observations of Dr. Merson are as follow:—

1. The quantity of urea varies above and below the average of health, being in the majority of cases considerably increased. Probably also the uric acid is increased.

2. The quantities of chlorides and phosphoric acid are notably diminished; that of sulphuric acid remains about as usual.

3. The specific gravity varies within wider limits than in health, but the mean does not differ materially.

4. The absolute quantity of urine passed is slightly below the average of the healthy cases examined; but, estimated according to weight of blood, the amount excreted by seventeen general paralytics was slightly in excess of that secreted by six healthy cases.

5. Under the influence of Calabar bean there is a considerable diminution in the quantity of all the solid constituents, especially the urea.

6. The results obtained in the three cases treated with alcohol are in favour of the view that both the quantity of urine and the amount of solid constituents are diminished under the influence of that substance.

The next paper is one on *Cerebral Anamia* from the fertile pen of Mr. Milner Fothergill.

He describes anæmia to be a decrease in the amount of arterial blood circulating through an organ in a given space of time; the dilating and contracting power of the blood vessels so altering their calibre, and thus permitting a diminution in the flow of blood.

The vaso-motor nerves affect the contraction of the circular muscular coat of the vessels, and the inhibitory nerves counteract this effect and produce dilation of the vessels and enlargement of their calibre.

The first point considered by Dr. Fothergill in his paper is the possibility of the occurrence of cerebral anæmia. He says: "The circulation within the encephalon is very active, and the vascular supply is unusually profuse, so as to admit of great functional power on the part of the intra-cranial contents. But the encephalon is enclosed in an unyielding bony case, the skull; how then, it may be asked, can it become more vascular at one time than another?" A number of experiments are here alluded to, which prove, without doubt, that certain changes take place in the vascularity of the encephalon. The brain when in a state of excitement becomes turgid, but during sleep there is a period of temperate quiescence, and it is pale and bloodless.

Dr. Fothergill informs us that these alterations within the cranium are due to the presence of the cerebral spinal fluid; the brain becoming more vascular as the amount of that fluid is diminished, and as the vascularity decreases the bulk of the fluid increases.

The anatomical appearances found in cases of cerebral anæmia are mentioned, and the conditions under which cerebral anæmia is induced are fully discussed.

General anæmia is the first condition which is considered, and any drain to the system by which the diminution of the amount of arterial blood flowing through the brain affects it. It has been estimated by Haller that the amount of blood going to the brain is a fifth of the whole bulk of the blood; a reduction, therefore, in the usual supply of blood would soon be apparent in the encephalic circulation. As an illustration of this we may mention constant drains on the system, such as morbid growths, imperfect nutrition, and dyspepsia.

Spanæmia is also given as one of the causes of cerebral anæmia; and the way in which it so arises, such as malarial poisoning, lithiasis, prolonged administration of certain medicinal drugs, are duly described. The other conditions which Dr. Fothergill mentions, and ably discusses at length, are: unfilled vessels; heart disease; pressure on the cerebral vessels; symbolism; venous stasis; apoplexy; gouty spasm of the cerebral vessels; organic disease, involving the cerebral vessels; vaso-motor disturbances of the cerebral vessels; artificial production by medicinal agents.

The prognosis in cerebral anæmia is generally, we are told, favourable, especially if no organic disease exists; but if it depends upon diseases of the blood vessels or organic changes in the heart, the prognosis is bad.

The progress of the disease, if not checked, passes on to melancholia and to mental deficiency, "the precursor of psychical torpidity and intellectual decay." We have a case of a young girl under our

own immediate observation with cerebral anæmia, followed by a typical cataleptic condition.

The treatment is now considered; the two main lines of treatment being the psychical and physical. With regard to the first of these, change of scene, travelling, cheerful society, are recommended.

In the physical or medicinal treatment, hematics, especially iron, is the most important, and in combination with arsenic. The following formula is given :—

R. Acid. Arseniæ gr. $\frac{1}{2}$.
 Ferri Sulph. exsic gr. vj.
 Pulv. Pip. Nepaul. gr. xij.
 Pil. Al. et Myrrh.

Vegetable tonics, such as quinine, strychnine, or calumba, are also recommended. The treatment for each of the various conditions in which cerebral anæmia occurs is entered into at length, much stress being laid upon the administration of alcohol where there is cardiac depression and contraction of cerebral vessels, and upon the judicious use of opium as a sedative, and to the inutility of hydrate of chloral and bromide of potassium; and we are told that these two medicinal drugs have a tendency to retard recovery, and “transfer the condition from that of temporary melancholia into that more advanced and permanent condition, chronic dementia.”

The paper is of a highly scientific and practical nature, and is one of the most valuable contributions in the Reports, and we look forward with pleasure to that on Cerebral Hyperæmia, which Dr. Fothergill contributes to the next number.

On the Therapeutic Value of Cold to the Head. Dr. Benham, M.D. —A number of interesting and original experiments are given to indicate the therapeutic value of the application of cold to the head. The instrument used by Dr. Benham to elucidate his subject is one invented by Ludwig, and called Ludwig's *Strom-uhr*. It enables us to estimate by volume the amount of fluid which passes through the vessel to which it is applied in a given time, and has been used extensively for experimenting by Dr. Lander Brunton. Dr. Benham does not attach much importance to the application of the icebag as a remedial agent in a direct way, as producing any action in reducing the temperature or lessening the blood supply of the vessels within the cranium, or by a sedative action upon the nervous centres. He is of opinion, however, that some reflex action may temporarily result from the application of cold thus employed.

The first question under consideration is whether cold applied to the scalp has any direct action in abstracting heat from the intra-cranial tissues. After a few experiments on this subject the following observations are made: that the temporary reduction of temperature obtained was not due to a mechanical abstraction of heat by the cold applied, but rather to some reflex action on the vessels, or a general lowering of the blood temperature.

Dr. Benham then considers whether the application of cold to the scalp can induce any indirect or reflex action in lowering the temperature of the intra-cranial tissues. Eleven experiments

are here carefully cited, but no accurate observations have been deduced.

The third and last theory is whether the application of cold to the head can produce in the intra-cranial tissues any appreciable action in lessening their blood supply. Experiments are also given, and the conclusion arrived at is, that the difference in the quantity of blood flowing through the common carotid artery is not appreciably lessened from the application of intense cold to the head for thirty minutes.

The writer concludes an interesting and original paper by informing us that cold when applied to the scalp causes a slight lowering of the temperature of the intra-cranial tissues, by reflex action, a slight diminution of the temperature of the body generally in consequence of the direct action induced by cold in lowering the temperature of the stream of blood passing through the capillaries in direct contact with it, and a slight decrease in the frequency of the heart's action.

The next paper is by Dr. Lauder Brunton, on *Inhibition, Peripheral and Central*.

The paper is of a highly scientific character. Inhibition is described in its various physiological characters, and we are told that it is not only in the restraint of passions and emotions that it is observed, but it occurs in all parts of the body, and it would appear that every motor centre has a corresponding inhibitory one.

The experiments of Weber, illustrative of the power of inhibition in producing restraint instead of excitement, are alluded to and described. Careful diagrams are given showing the physiological actions of various nerves under inhibitory action. The paper is so exhaustive that we cannot do justice to it in a short notice; the ideas are original, but based on a thoroughly practical and physiological footing, and are the result of sound careful research.

A paper by Dr. Major, on *Observations on the Histology of the Morbid Brain*, is now given.

The observations are chiefly confined to the consideration of the cortical substance in senile atrophy of the brain. The paper is illustrated with carefully executed diagrams of healthy brain-cells and those found in senile atrophy. Dr. Major has come to the conclusion that, in senile atrophy, the cells through the entire depth of the cortical layer are morbidly affected, and that in the large nerve-cells the morbid process is one of granular degeneration, but in the smaller cells there is simple atrophy without granular degeneration. The nuclei of the cells are degenerated and ultimately become destroyed, also the branches of the large cells at an early period.

The large vessels and capillaries are dilated, and the vascular canals are enlarged and the surrounding cerebral substance is indurated. The fibres are abnormally coarse and tortuous and in some parts broken down.

The *Neurolgia*, which includes the delicate, almost homogeneous matrix supporting the nerve elements, is in a state of atrophy and degeneration, and the corpuscles increased in number, but eventually shrivel and atrophy. The paper is a highly scientific one and deserving careful study.

An interesting and clever paper is given by Dr. Lawson on *The*

Hourly Distribution of Mortality in relation to Recurrent Changes in the Activity of Vital Functions.

We are told that in chronic diseases the chief hours of depression and exhaustion occur between the hours of 3 and 6 A.M., and that it is necessary between these hours to take the greatest care of our invalid by careful nursing, attention, and feeding. The paper does not bear directly on our subject; but we do not care to pass it by, it being evidently the result of careful experiments and research.

Dr. Crichton Browne, the able editor of these Reports and Superintendent of the West Riding Asylum, gives us a paper on *Acute Dementia*.

Dr. Browne commences by describing the various forms of dementia—primary dementia, senile organic dementia. The first of these varieties has been called apathetic dementia, in allusion to the complete torpor of feeling by which it is marked; the term *stupidité* is applied to it by Georget. Females are attacked more than males, but it is rarely seen in persons over thirty years, and we are told it depends “upon exhausting influences operating at a period of rapid growth.” The chief moral cause of acute or primary dementia is mental inanition or monotony of thought and feeling.

Dr. Browne says: “Man does not live by bread alone—his dietary must be varied, and if it is not varied he is starved as effectually as if he were kept on short commons. And the same is true of his mental food; that, too, must be varied, and if it is not varied it ceases to nourish him, and he pines into dementia.” No doubt solitary confinement, living a monotonous life, and residing for a length of time in the same place are all predisposing causes to mental aberration. We are told that anæmia and spæmia are sometimes prominent causes of dementia. Acute dementia frequently follows exhaustive diseases, and universal mental inertia frequently continues for some time after typhoid fever; this is an undisputed fact.

Acute dementia begins in one of two ways, either gradual and at first by imperceptible encroachments or by maniacal excitement. Dr. Browne now accurately and graphically describes the ingress of dementia, and mentions a few cases to bear out his remarks. The acme of dementia is a mental state of profound stupidity. This stage is now described, the mental condition as well as bodily being given.

Dr. Browne, having thus sketched the indications of dementia, gives some most interesting and diagnostic cases to illustrate his remarks.

The pathological changes are now stated. Venous congestion affects the whole encephalon; but the frontal and parietal lobes are chiefly implicated. The vessels become œdematous from the accustomed want of tone; this causes pressure on the brain, and if of long continuance atrophy follows. Acute dementia may, then, be stated to be a disease of venous congestion.

The paper concludes with the various remedial agents which have been tried by Dr. Browne in the treatment of dementia. Quinine appears to have been tried with great success in large doses, under its influence the atonic vessels become invigorated. Guaiacum also appears to have the same result. If anæmia is present iron may at once be prescribed. Dr. Browne has found the mineral acids useful if much prostration is present.

Among the prophylactic remedies are mentioned moderate exercise, application of cold to the head, and electricity to the brain; and this latter can be commended.

The paper is a very practical and instructive one, and should be carefully read and studied, as it contains original opinion founded on great experience, skill, and care in the treatment of the insane.

Dr. Crichton Browne's paper is followed by one by Dr. Charles Aldridge upon *Ophthalmoscopic Observations in Acute Dementia*.

Sixteen cases are quoted, from which deductions are drawn. The condition of the retina in acute dementia and atonic melancholia is that of anæmia, the optic discs are pale, the tint of the choroid is lowered, but not resembling atrophy, there being a want of the sharpness and brilliancy of pallor found in atrophy. The retinal vessels are small and shrunk, but no trace of previous tortuosity is apparent as is often seen in atrophy. Our attention is drawn to many points of resemblance between acute dementia and catalepsy. Reference is made to the investigations of Hammond and others with the ophthalmoscope in mental disorders, and the subject is most carefully and clearly discussed by Dr. Aldridge.

The volume concludes with a paper by Dr. Benham, Pathologist and Assistant Medical Officer at the Asylum, upon *The Actions of Nicotine*.

A great deal of care and trouble has evidently been taken by the author to investigate clearly the action of nicotine; and by a careful perusal of his paper we see that in man as well as animals the temperature is diminished under its administration, and the pulse is quickened under the effect of small doses. This increase in the number of the heart's pulsations is not accompanied by a diminution in its vigour; this is demonstrated by the sphygmograph; and from this we may conclude that small doses of nicotine do not, as is supposed, act as powerful depressants, but as stimulants and invigorators. The experiments from which these deductions are drawn are fully and carefully described, and the paper concludes a most interesting and valuable volume of psychological articles, all of which are the result of scientific and practical research and reflect great credit upon the editor.

2. *Lectures upon the Structure and Diseases of the Nervous System.**

THIS interesting little brochure is composed of a course of lectures on the Structure and Diseases of the Nervous System, delivered by M. Luys, the well-known physician of La Salpêtrière. M. Luys, though not attached to the École de Médecine of Paris either as a professor or an extra-mural lecturer, is rapidly acquiring a great reputation as a teacher, and has already obtained a wide celebrity from his

* *Leçons sur la Structure et les Maladies du Système Nerveux.* Par J. Luys, Médecin de la Salpêtrière, Lauréat de l'Institut (Académie des Sciences), de l'Académie de Médecine, et de la Faculté de Médecine. Recueillies par J. Davo, Interno du Service. Baillière, Tindall & Cox. King William Street, Strand.

admirable researches on the cerebro-spinal nervous system and his photographic iconography of the nerve centres. His aim in teaching is to initiate his pupils little by little into the great questions of cerebral activity, in its *ensemble*, and thus by degrees give them precise formulæ of the different operations both of psychological and intellectual life, the phenomena of which have been but too little studied by our professional brethren. The mysteries of psychology form the most seductive and attractive studies of human science, whilst they are also the most obscure, undecided, and most open to discussion. All his efforts tend to show that the varieties of mental maladies derive their origin in a material lesion of the nerve centres, and that there is a natural and constant connection between the regular acts of an active healthy brain, and the different functional deviations in insanity.

M. Luys first treats of his mode of preparing morbid specimens for examination, and the various sections most useful for a careful study of the brain. After an exhaustive description of the structure of the cortical grey matter, he shows the direction of the fibres of the white matter, and divides them into two classes: (*a*) Those having a radiating and converging direction, he terms the converging system; (*b*) And those uniting the two halves of the cerebrum and forming the corpus callosum, the commissurant or anastomotie system. From his physical examination of the pathological conditions of the cortical structure, we are told that partial atrophy of certain convolutions is the pathological condition in paralytic dementia.

M. Luys now considers the pathological anatomy of the convolutions. He lays great stress upon what he deems to be the principal character of the structure, viz.: (1) the stratification of the cells into distinct zones; (2) the lateral anastomoses between the cells of each zone, and anastomoses between the successive zones; (3) the distribution of small cells in the superficial, and of the large cells in the deeper zones. From these and other anatomical facts as to the disposition of the cells and fibres, he makes the following physiological deductions. Each zone plays a particular rôle and possesses functions peculiar to it; and, though the present state of science does not enable us to limit in an exact manner the special attributes of any particular order of cells, still, by comparing them with the elements of the spinal cord, we can already make certain legitimate inductions relative to their diverse activities. The large cells correspond to the large cells found in the anterior cornua of the spinal cord, whilst the small superficial cells bear a certain analogy to the small cells of the grey matter. The superficial zones, then, may be considered as disseminating the impression of general sensibility (as the *sensorium commune*) and the deeper zones as the origin of motor impulses. These deductions are of course but mere hypotheses more or less rational, still they are well supported by the experiments of Flourens, Louget, Schiff, and Ferrier.

The various pathological conditions of the cortical matter are next carefully described, and the lesions of the vessels and cells treated at considerable length.

The white matter is carefully described, especially as to the direction and functions of the commissurant and convergent systems of fibres. The corpus callosum he treats as a physiological as well as an

anatomical commissure, and its absence he identifies with congenital idiocy.

The description of the *thalami optici* (couche optique) forms the most original, if not the most instructive part of the book. The *corpus album subrotundum* of Arnold and the other two ganglions he names the anterior, middle (moyen) and posterior centres, and to these he adds a fourth which he himself has discovered—the median centre. He gives them each a second name, descriptive of their functions. The anterior centre, from its connection with the *tania semi-circularis* and the olfactive impressions, is called the olfactive centre. The *centre moyen* receives the nerve fibres of the second pair, hence the name of optic centre. The *centre médian*, from its close relation to the sensitive fibres of the convergent system, is termed the centre of general sensibility. The posterior centre plays an important rôle in the perception of sounds, hence the name of acoustic centre.

In support of the physiological deductions made in these chapters, he cites several pathological facts, grouped under three exhaustive heads: (1) anatomo-pathological proofs; (2) proofs of experimental physiology; (3) clinical proofs. The latter proves, in the most irrefutable manner, that the optic thalami receive, preserve, and transform the sensorial impressions previous to their definitive irradiation to the cortical periphery. The functions of the optic thalami, in their relation to intellectual alimentation, are not inaptly compared to those of the mouth in receiving and preparing the alimentary bolus before it passes into the stomach.

The description of the brain is now concluded with a careful account of the corpus striatum. He regards the corpus striatum as the centre of the reception, regulation, and elaboration of voluntary motor impressions emanating from the deep layers of the cortical matter. The pathological facts confirmatory of this theory are divided into two classes: (1) Those in which a destruction of the corpus striatum has resulted in motor paralysis, with preservation of intelligence, more or less complete, according to the extent of the lesion; (2) those in which its functions have not been destroyed, but merely obstructed by a compression or partial degenerescence of the elements, entailing certain disorders in the motor sphere.

M. Luys concludes by attempting to elucidate the most complex of all motor phenomena—the action of emitting articulate sounds. The act of speech differs from the other modes of expression, firstly, in not being the movement but merely the result of the movement which makes us aware that the order of the will has been executed; and secondly, because in the phono-motor apparatus, though composed of two symmetrical halves like the rest of the body, they are not distinct so far as their functions are concerned. The bilateral integrity of the apparatus is a *sine quâ non* of the perfect exercise of verbal functions. This part of the work seems unfinished, and is rather obscure, though we might expect this when we consider the difficulties to be encountered.

We have a specimen of M. Luys' ability as a photographer in the five illustrations, dissections of the optic thalami. With the introduction of photo-mechanical printing a new era in book illustra-

tion has begun, and we hope soon to see our medical text-books illustrated without the intervention of the draughtsman or wood engraver.

In conclusion, though we do not agree with all M. Luys' deductions, we can certainly recommend everyone interested in the elucidation of the mysteries of psychology to read the book carefully, and if possible, by original research, to contribute his mite to the grand end and object which the talented author has in view. We shall look forward with pleasure to the next work from the fertile pen of M. Luys.

3. *The Skull and Brain: their Indications of Character and Anatomical Relations.* By NICHOLAS MORGAN. London. (Pp. 208.)

ONE of the chief desiderata of modern thinkers is the reconciliation of the old and new philosophies—a *via media* between the creed which holds intelligence to be altogether independent of matter, and that which holds mind to be a function of the brain—a fusion between the pure metaphysicians and the ultra-psychologists. And, now when animals are declared to be automata, when the onward movements of the headless water-beetle and of the vivisected centipede, evidently depending upon impulses imparted to the general nervous system previous to or at the moment of decapitation or dismemberment, in virtue of the same law which leads to the growth of the nails in the dead, have become the gage of battle between such combatants as Huxley, Carpenter, &c., the necessity for such a reconciliation has become more clamant. Mr. Morgan's work seems calculated, in a certain measure, to promote this union: for, although he proclaims the doctrine that mind is connected with the brain, that all psychical acts depend upon or are influenced by the integrity and condition of the nervous system, a doctrine which few will repudiate who have traversed the wards of a Lunatic Asylum, or who have had a friendly mind dulled or darkened by a blow on the head, or a friendly voice silenced for ever by a structural change in a small convolution, he shows very clearly that the division of mind into classes of faculties or powers, and the localisation of these, very slightly, if at all, affect the analysis of their nature and scope, or the results obtained by observation and experience. His chapters on the "Exposition of the Will" and on the "Science and Attributes of Mind" demonstrate that there is a metaphysics of Phrenology, and that its principles do not differ more widely from those upon which other systems of philosophy are founded than these do from each other. As may be inferred from the title of the work, large portions are devoted to the consideration of the objections urged against the principal dogmas of Phrenology; of the recent corroborations of its truth derived from collateral sources, such as the observations and experiments of Turner, Ferrier, and Ecker; of the anatomy and physiology of the brain and its dependencies, as affording direct support to these truths; of the classification and combinations of intellectual, emotive, and instinctive faculties; and of the practical

application of the external cranial signs of these faculties in understanding the character and conduct of individuals and nations, and in elucidating the complexities and difficulties which are involved in every social and domestic relation. The book is not, however, a mere Phrenological Vade-Mecum, although it may serve as such, but a lucid exposition of mental conditions in relation to matter, which should interest, inasmuch as it affects, every individual. To those who barely know the rudiments of phrenology the volume may prove a valuable elementary treatise; to those who are more advanced in the study and knowledge of the science, there will be afforded much information, and many new views as to the present state and the future development of what must ultimately become, although perhaps in a somewhat modified form, the trustworthy exponent of the attributes and capacities of human nature.

4. *Remarks on the Origin, Varieties, and Terminations of Idiocy.*

By G. W. GRABHAM, M.D., Superintendent of Earlswood Asylum.

A PAPER on the above-mentioned subject was read by Dr. Grabham at a meeting of the South-Eastern Branch of the British Medical Association, but subsequently the author was requested to publish it as a pamphlet.

Dr. Grabham commences his little book by drawing a distinction between *Idiocy*, *Imbecility*, *Cretinism*, and *Dementia*. With regard to cretinism, it may be regarded as "an endemic form of idiocy or imbecility, in which there is, moreover, characteristic arrest of development, malformation, and deformity of the whole organism." To the other terms the accepted definitions are given, and they are all more or less allied to each other. The causes of these affections are divided into four heads—endemic, hereditary, parental, accidental; but the same cause may produce, according to the age of the patient, different results. In infancy epilepsy will produce idiocy, in more advanced years imbecility will ensue, and in old age it will cause dementia.

A very large portion of the idiots at present under treatment at Earlswood are of the male sex, the proportion being two to one, and 65 per cent. of the cases are reported as being congenitally defective. Among the various causes discussed at length by Dr. Grabham, we may mention hereditary predisposition as the chief one. Dr. Grabham says: "Many of my patients, not born with defective intellect, have, nevertheless, inherited a predisposition which ultimately led to it. In about 18 per cent. hereditary taint is admitted, but I am convinced that it exists in a far greater proportion; indeed, I have in numerous instances found this to be the fact from observations of the parents, or enquiries among their acquaintances. A mother, from whom I could learn no history of mental disease, and who certainly showed no indication of it in my presence, was afterwards found frequently to be removing to new lodgings, because 'poison was put down the chimney into her food.' In another case I learned, after strenuous denial of any mental affection in the family, that two of the mother's sisters had been insane,

and that she herself was highly hysterical. Where actual mental disease cannot be ascertained to have existed, we frequently find a history of neuroses, or chorea, and often eccentricity in one or both parents. A lady tells me, in a letter, that 'her husband used to say that there was no such a place as Hell, but she hopes now that he has found out his mistake.' "

These two cases are sufficient to illustrate the eccentricities of some persons, and amounts to *positive* insanity.

Intemperance of parents is cited as one of the principal causes. Dr. Langdon Down, the late superintendent at Earlswood Asylum, considered "drunkenness during conception" as one of the chief causes, but Dr. Grabham takes exception to this. It has been universally the opinion of psychologists that consanguinity of the parents is one of the chief causes of mental disorder, and especially idiocy, and we must confess that the majority of cases of idiocy which have fallen under our immediate notice could be traced to intermarriages, especially of first-cousins. We are here, however, told that only 6 per cent. of the cases admitted into Earlswood Asylum during the past six years could be traced to consanguinity of the parents, and in 11 cases out of 543 the parents were first-cousins. Tubercular diathesis and history of phthisis were found in 22 per cent. of the cases, and in 66 per cent. injury to the mother during pregnancy acted as the cause. The reason here given for the prevalence of idiocy among males is that, in consequence of a larger cranium than is found in females, more risk follows in delivery.

Convulsions shortly after birth, or during the first dentition, account for nearly 20 per cent. of Dr. Grabham's cases; and amongst the other causes may be mentioned injuries, illness or shocks during infancy or childhood, fevers, whooping-cough, or congenital syphilis; but in 27 per cent. of the cases no cause could be ascertained. In discussing the varieties of idiocy, Dr. Grabham says: "The varieties of idiocy, using the term in a general sense, are very numerous, and run so much one into another, that it is difficult to classify them; and, as a rule, it is impossible to connect the various types with their respective causes. It may, however, prove interesting to describe the salient features of some classes, with a few remarks on diagnosis and prognosis. Idiocy, unless very marked, is not always to be recognised in early infancy. The form and size of the head alone must not be relied upon, but may furnish valuable evidence when considered in conjunction with other physical and mental signs. Some idiots have well-proportioned heads, and a small head does not necessarily betoken idiocy. It is necessary to observe the way in which the infant takes and swallows nourishment; its general aspect, the flaccidity or otherwise of its muscles; its ability to raise or steady its head, to grasp the finger with its hand; its capability of noticing any passing objects, and following them with its eyes; its listening to or disregarding sounds, and the character of its voice. As life advances the diagnosis becomes daily more easy. We compare the progress the child makes with that of other children; notice the state of the fontanelles as to closure; the form, size, and symmetry of the head; the palate, whether highly arched; the existence of any deformity; the state of the hands, as to

their power of grasping; whether the fingers are thin, tapering, moist with saliva, and flaccid; the power of co-ordinating the muscles and directing the movements of the eyeballs; the circulation, whether feeble in the extremities; the presence or absence of paralysis or epilepsy: all these points will aid our diagnosis."

We are told that some idiots appear so intelligent that the propriety of their detention in an asylum is sometimes questioned, but Dr. Grabham clearly proves that they are only fit to be so treated. Epilepsy is prevalent in a very large portion of the cases; and one or more functional derangements, such as bad assimilation, physical weakness, atrophy of the bones, &c. &c., are universally present. The diseases met with in idiots are of the "asthenic type," and consumption is one of the natural terminations of the affection. A very interesting case is given, in which Dr. Grabham found hard masses the size of a filbert in the white matter of the hemispheres, and the corpus dentatum of the cerebellum was nearly entirely supplanted by a hard scirrhus mass, through which nerve-fibres were seen to pass: this, upon submission to Dr. Lockhart Clarke, was pronounced to be tubercle. The pamphlet is an attractive one, and we trust at a future period we may have some more of Dr. Grabham's practical experiences.

5. *The Chicago Journal of Nervous and Mental Diseases.*

THIS Journal is edited by Dr. Jewell, Professor of Psychological Medicine in the Medical School of Chicago, who is assisted by Dr. Bannister. The number before us contains an interesting article upon the "Relations of the Nervous System to the Uterus." A careful description is given of the general anatomy of the uterus, more especially with reference to menstruation and labour. Allusion is made to the nervous supply of the uterus, and to the elaborate dissection of the uterine nerves made some years back by Dr. Robert Lee; also to those of Jobert. These views, though differing from those of Dr. Robert Lee, still to a certain extent correspond. From the considerations here given to the nervous supply of the uterus, the two following conclusions have been arrived at:—

(1.) That the uterus is bountifully supplied by nerves both from the sympathetic and cerebro-spinal systems, and that its nervous connections with other organs are both numerous and important.

(2.) That there is some anatomical justification in the supposition that the neck and body of the uterus derive their nerve-supply from a different source—the one being supplied wholly by the hypogastric, and the other partly by the ovarian plexuses.

Dr. Jewell now considers briefly the physiology of the uterus. We are reminded, by reference to a work published in Greifswald, entitled '*Ueber das centrum Genito-Spinale des N. Sympathicus*,' that the spinal cord has a direct influence upon the organs of generation. The experiment made by Budge, in proof of this, was as follows:—He

exposed the corda-spinalis in a small rabbit, at the same time exposing the testis, vas deferens, and vesicula seminalis on the one side. By irritating the exposed lumbar portions of the cord, it was found on numerous occasions that active motions in the vas deferens and vesicula seminalis were induced on that portion of the cord which corresponded to the fourth lumbar nerve, no such effect following irritation of any other part of the cord. These experiments were repeated many times in the female, and the motion of the uterus excited from irritation of a corresponding part of the cord.

Notwithstanding these conclusions have, to a certain extent, been controverted, there is little doubt in the minds of Physiologists that there exists a genito-spinal centre in the lower part of the cord, which may be regarded as the immediate spinal nervous apparatus of the uterus, as well as of the male sexual organs. Dr. Jewell lays down for our acceptance the following hypothetical propositions:—

1st.—The probability that in the lower part of the corda-spinalis there exists one or more centres from whence the nerves proceed to supply the uterus.

2ndly.—That in the human subject there are some anatomical grounds for believing that the genito-spinal centre is near the origin of the fourth sacral nerve of the spinal cord.

3rdly.—That there are certain reasons for inferring that the genito-spinal centre consists of two or more subordinate centres, which serve different purposes, but are supplied to the uterus in different ways.

After some exhaustive descriptions of the anatomical and physiological relations of menstruation to labour, in illustration of which two elaborate diagrams are given, the writer passes on to consider the practical bearings of the direct effect of the nervous system upon the uterus. He narrates a few cases to elucidate this part of his theory, and he concludes this interesting paper with a few original remarks on the physiology of labour and the individual part enacted by the cervix and body of the uterus during parturition, with special reference to the reflex action taking place in each part respectively.

Another article worthy of our attention is that relating to the use of nitrite of amyl in the treatment of epilepsy. The pathology of epilepsy, according to the present existing theories—that it is due to an over-sensibility and excitability of the medulla oblongata—is here fully discussed. Cases in illustration of this are cited, in which nitrite of amyl has been tried with considerable success. Dr. McBride, the author of this paper, sums up by informing us that the cases in which this remedy is mostly to be relied upon are those in which there is a distinct aura epileptica, and he suggests that persons suffering from epilepsy should carry a small bottle of nitrite of amyl about with them, and when an aura is apprehended should inhale the drug, and by so doing the convulsions can be averted. The dose he recommends is ten to fifteen drops of the nitrite placed upon a piece of cotton-wool, and taken by inhalation, but the dose should be increased until the desired effect is attained. The theory here advanced is that the drug has a direct influence upon cerebral circulation.

Besides these two articles there are no others in the journal directly bearing upon Psychological Medicine. It, however, contains some

interesting reviews and bibliographical notices of books relating to psychology; and the report is concluded with a most interesting periscope, containing clinical cases and other matter connected with the treatment of insanity; and we must highly commend the perusal of this journal to all interested in the care and the treatment of the insane.

6. *Friendly Talk with a New Patient.*

Visiting Day at the Asylum.

Made Whole. A Parting Address to Convalescents on leaving an Asylum.

Work in the Wards, by Asylum Attendants.

THERE is, perhaps, no discharge of the clerical office demanding more care and tact than that of a Chaplain to an Asylum, and his is a singularly delicate, trying, and difficult position. He must be a psychologist in the highest sense. Dealing with the human intelligence in its saddest aspect—with minds intellectually and morally disorganised, with reason either trembling upon its throne or prostrate at its base, a shattered and a ruined mind—he must be a mental philosopher and a sound theologian of no ordinary character.

The Rev. H. Hawkins, to whose ready and practical pen we are indebted for these publications, has established his claim as a true type of his responsible office as Chaplain of one of our most important and popular asylums. It is interesting and instructive to observe with what experience and tact he has met each stage of his melancholy yet most benevolent mission. The *Friendly Talk* which greets the incoming patient is admirably calculated to soothe the sense of isolation and loneliness, and fill the desponding mind with the 'sunshine of hope; at the same time conveying practical instructions bearing upon the duties and privileges of a difficult and untried position.

Not less needed and valuable are the hints embodied in the *Visiting Day at the Asylum*, regulating the intercourse with the patients of relatives and friends whose affection and sympathy bring them to the institution. Much wisdom and caution are needed here. The importance of assuming a cheerful air, of speaking in tones of encouragement, of studiously avoiding allusion to the cause of the malady—above all, gently leading the disturbed mind to a contemplation of the Fatherhood of God, are dwelt upon in this little work with remarkable skill and tenderness.

But if our author welcomes with words of greeting the incoming patient, not less affectionate and instructive are his parting counsels to the outgoing one. Not satisfied with an earnest discharge of his anxious duties in the sick room and the lonely ward, when discharged convalescent, to mingle once more with the outer world, Mr. Hawkins follows his parishioner—for so we must term him—to his restored home with words of counsel well calculated to avert a relapse of the terrible malady.

Made Whole, a parting address to the convalescent patient, is the

touching endearment of his affectionate farewell. He is earnestly and tenderly exhorted to avoid all those predisposing causes which first originated the calamity, and to pursue such a course of virtue, activity, and occupation as is best calculated to promote the physical, mental, and moral well-being of the patient.

Work in the Wards by Asylum Attendants, we consider the *chef d'œuvre* of our author. It is here his sound practical wisdom and true piety pre-eminently appear. It is the rich result of a long experience in the duties of an asylum—to quote his own words, “many years engaged in the field of duty”—and who therefore speaks with authority and force of a veteran in one of the most difficult and delicate missions that could possibly be confided to human hands. This concise but comprehensive little manual of instructions should be adopted as a text-book in all our hospitals, sanatoriums, and asylums throughout the land; a copy placed in the hands of all who devote themselves to the noble art of alleviating physical disease, but especially to the most terrible form of all maladies—the *mental*.

But if there is one charm in these little works more attractive than another, it is the healthful, moral and religious tone which pervades their pages. The author has discovered the grand secret of mental repose, which it were well for all to study to whom is entrusted the difficult but benevolent task of “ministering to a mind diseased.”

He enriches his work with apposite quotations from the sacred writings, and culled with much judgment and taste. We cannot take leave of Mr. Hawkins without expressing our acknowledgment for his able and successful contributions to what may be termed the “moral and practical literature of the insane.” We should esteem it a happy circumstance were the valuable publications we have thus briefly and imperfectly noticed made to flood every similar institution throughout the world.

7. *Out of the Body.* By JAMES S. POLLOCK, M.A., Incumbent of St. Albans, Birmingham Rivingtons, London, Oxford, and Cambridge.

IN this work the author discusses the unanswerable question: What becomes of a human being immediately after death? This is a problem which, from the earliest ages, has agitated the minds of men. We cannot think that the author has succeeded in throwing any fresh light on the subject. He belongs to the new school of what is called *Biblical Psychology*. As this subject is better suited for the pages of a theological than a scientific journal, it would be out of place here to give a sketch of his speculations on “The Spirit World,” “Spirit Groups,” &c.; nevertheless, we cannot refrain from quoting the following interesting and suggestive remarks on what he terms “Dream Life.”

“The Bible calls death a sleep. Sleep is a state of unconsciousness; the departed are unconscious. Let us consider this.

“The assumption here is that sleep is unconsciousness. This is a foregone conclusion with some men. They do not prove it; they do

not enquire into it. The simple assertion is made; our assent is reckoned on as a matter of course.

"Hence they go on to demand our concurrence in a more important theory—the unconscious sleep of the departed spirit. In vain we protest against the conclusion, and maintain that no such doctrine is taught in the Bible. Holy Scripture, indeed, says that death is a sleep; it does not say that it is 'an unconscious sleep'—a 'period of the most utter and unbroken sleep, unvisited by a dream.'

"It is clear that we cannot know what the 'sleep of the soul' is until we know what sleep is. And here lies the difficulty. Men observe a veiling of the consciousness, as they think, in sleep. They are not careful to make further observations. They will not give due weight to facts that thrust themselves upon the notice of other men. Their assertion is, that sleep is a state of unconsciousness; they dare not say that the unconsciousness is total, for that they cannot know. But, on the other hand, they refuse to qualify the statement in deference to admitted facts.

"The facts to which I allude are simply these: Sleep is *begun*, *continued*, and *ended* in consciousness. Waking and sleeping consciousness differ. The change of state suggests a change of consciousness. There is a change in kind if not in degree.

"Sleep is *begun* in consciousness. Those that 'fall asleep' see and hear and feel things of which they were not conscious before slumber began to take possession of them. 'Falling asleep' is the occasion of a new consciousness.

"Sleep is *ended* in consciousness. During the act of waking the mind is conscious of scenes and appearances which vanish at perfect wakefulness. Waking from sleep is the occasion of a new consciousness.

"Sleep is *continued* in consciousness. I do not speak now of 'mere dreams.' It is undoubted that persons when 'fast asleep' are susceptible to certain sounds, can converse intelligibly with those that stand by their beds, can walk about, can work, and can even do difficult things that were beyond the powers of their waking consciousness."

The book will give our readers a good notion of what is meant by Biblical Psychology.

8. *The Protoplasmic Theory of Life.* By JOHN DRYSDALE, M.D.
Edin., L.R.M.S. Baillière, Tindal, & Cox, London.

THE subject of this work, as the author states, was the theme of an inaugural address delivered by him in the year 1874, as President of the Microscopical Society of Liverpool. In it he endeavours to prove that the modern views concerning the nature of life were anticipated by the late Dr. John Fletcher, of Edinburgh, in 1835, in his work entitled *Rudiments of Physiology*. We think, however, that his claim to be the discoverer of the Protoplasmic Theory is as strong as that of Chaucer to be the founder of the Crystal Palace, because he wrote a vision of a vast structure of glass.

The work is useful, as containing a *résumé* of all the modern theories of life. One-third of the volume is devoted to the discussion of Dr. Lionel Beale's interesting microscopical researches, of which the author speaks in the highest terms.

We regret to find that his proclivities are towards Materialism; but, by a strange inconsistency, not uncommon in the present day, he expresses an unhesitating belief in the truth of Revelation.

9. *Materialism.* By J. M. WINN, M.D., M.R.C.P., &c. London: Robert Hardwicke, 192 Piccadilly.

WE are glad to find that this Essay, which originally appeared in the *Journal of Psychological Medicine* for April 1875, and which attracted so much attention, has just been published in a separate form, with an Appendix. In his Preface the author gives his reasons for the reprint, as follows:—

“The flattering manner in which it [this treatise] was received by many leading members of the medical as well as the clerical profession, combined with the solicitation of friends, who thought it would be of use in checking the tide of infidelity that is rising so high in this country and abroad, have induced the author to lay it before the public in a separate form.”

PSYCHOLOGICAL RETROSPECT.

SINCE the issue of our last number nothing of very great interest or importance has occurred relating to Psychology.

Another Session, we regret to say, has passed away without any attempt having been made to legislate for the care and treatment of Dipsomaniacs. The House of Commons has chiefly been occupied with the discussion and consideration of unimportant matters, and notwithstanding the deputation which waited on the Home Secretary, and introduced by Lord Shaftesbury, nothing has as yet been done in this most important matter. Dipsomania is rapidly on the increase, and some immediate steps should be taken to protect this unhappy class of society. We give the following extract from the *Lancet* relative to the increase of dipsomania in Rome:—

The abuse of alcoholic liquors is deplorably on the increase among the Latin races in general, and the Italian in particular. The Roman physicians have had their attention rather pointedly drawn to the fact in the Eternal City, where, in addition to the usual crimes of violence, the increasing dipsomania has enhanced the periodical returns of disease and death from maladies of the nervous system. Take, for example, Dr. Fiordispini's last report on the cases and causes of insanity in the Manicomio. Chronic alcoholism, with its foster-child, general paralytic dementia, figures largely in his pages. And no wonder. Few climates are so little tolerant of alcohol, even when moderately indulged in, as that of Rome. Its temperature, almost invariably warm and humid, relaxes the muscular and nervous energies, and favours somnolency—a condition which, by “slowing” the circulation, conduces to hyperæmia (cerebral, abdominal, and hæmorrhoidal), and causes fatty degeneration through deficient oxidation of the albuminates. The histological modifications thereby induced are soonest and most determinately operative on the brain, with the obvious results. Dr. Fiordispini appeals to the guardians of public hygiene in Rome to diminish the number of liquor-shops, already more than sufficient, and to co-operate with the medical profession in combating a vicious propensity so insidious in its advances and so disastrous in its results.

The following petition has been presented to the Medical Examining Boards, praying that three months' clinical instruction in the wards of a lunatic asylum may be substituted for a like time of study in the wards of a hospital:—

1. That your petitioners are lecturers on insanity or psychological medicine in the schools of medicine to which their names are attached, as below.

2. That their courses of lectures are not (by the regulations of any qualifying board) imperative on students of medicine as a part of their curriculum of professional study.

3. That your petitioners are aware of the grave objections to adding to the already large number of subjects which students of medicine have to master during their period of study; but they venture respectfully to suggest, that the entire absence of any provision for the clinical study of so important a branch of medicine as insanity and its kindred diseases cannot but be prejudicial to the interests of a large majority of students in their future careers.

4. That insanity is not (like diseases of the eye, teeth, etc.) to be met with in the wards of a general hospital, and that consequently students have no opportunity for observing it without attending at a lunatic asylum.

5. That, of the great number of asylums and hospitals for the insane which there are in the country, there is at least one contiguous to every medical school in the kingdom.

6. That your petitioners not only lecture on insanity, but also have the means of affording clinical instruction in asylums for the insane of easy access to the students, and that their lectures and *cliniques* include both insanity, and many other important nervous diseases of a class which are not usually seen in general hospitals—such as epilepsy, paralysis, softening and tumours of the brain, chorea, hysteria, hypochondriasis, and others.

7. That there are, on the narrowest computation, four hundred medical men now engaged in the speciality of mental disease, either as officers, or as medical attendants at the asylums or other receptacles for the insane in the United Kingdom of Great Britain and Ireland—this number having greatly increased of late years, and there being an increasing difficulty in procuring qualified assistants for asylums; and that it is of the highest importance that those entering this department in future should have some practical and scientific knowledge of this most difficult branch of medicine, not only for their own comfort and satisfaction, but also in order to the proper treatment of the insane and the advancement of science.

8. That the University of London has the following regulation and note thereon: "Attendance during three months in the wards of a lunatic asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice." "The senate regard it as highly desirable that candidates for the degree of M.B. should practically acquaint themselves with the different forms of insanity by attendance in a lunatic asylum."

9. That your petitioners are of opinion that, if the regulations laid down by the University of London were adopted by all examining boards, a great boon would be conferred on many students, who might then, without sacrifice of time, which they can hardly afford, avail themselves of the opportunities for studying a class of diseases with which at present they have little or no practical acquaintance, but which are of all others liable to entail on medical practitioners heavy losses both of prestige and of fortune. Indeed, so undoubtedly is this the case, that it is within the knowledge of your petitioners that many medical men of skill and repute have declined to give an opinion and certify in cases of insanity, in consequence of the disastrous results into which a faulty certificate may lead them—thereby, in the opinion of your petitioners, shirking responsibilities which, as fully-trained medical men, they are bound to accept.

Wherefore your petitioners humbly pray that you will be pleased to take into favourable consideration their petition, that it shall be permitted

to students of medicine who wish to qualify to appear before you for examination, to substitute, if they so desire, a three months' course of clinical instruction in the wards of a lunatic asylum for the same period of attendance in the medical wards of a general hospital.

The following gentlemen attach their signatures :—G. Fielding Blandford, M.D., F.R.C.P.L., St. George's Hospital, London; J. Crichton Browne, M.D., F.R.S.E., Leeds Medical School; T. S. Clouston, M.D., F.R.C.P.E., Royal Edinburgh Asylum; W. J. Hunt, M.D., F.R.C.P.E., Charing Cross Hospital, London; Robert Jamieson, M.D., University of Aberdeen; T. Laycock, M.D., F.R.C.P.E., University of Edinburgh; Henry Rayner, M.D., Middlesex Hospital, London; Alexander Robertson, M.D., F.F.P.S.G., Town's Hospital and Asylum, Glasgow; W. H. O. Sankey, M.D., F.R.C.P.L., University College, London; George H. Savage, M.D. Lond., Guy's Hospital, London; T. Claye Shaw, M.D., M.R.C.P.L., St. Bartholomew's Hospital, London; Edgar Sheppard, M.D., D.C.L., King's College, London; H. Sutherland, M.D., M.R.C.P.L., Westminster Hospital, London; John Batty Tuke, M.D., F.R.C.P.E., F.R.S.E., Extra Academical School, Edinburgh; R. H. B. Wickham, F.R.C.S.E., University of Durham; W. Rhys Williams, M.D., St. Thomas's Hospital, London; and D. Yellowlees, M.D., F.F.P.S.G., Royal Glasgow Asylum."

The result of this petition to the Royal College of Physicians was the following important resolution: "That the Registrar prepare and submit to the College, 'That students who wish to qualify for the examination for the membership or licence of the College may substitute, if they so desire, a three months' course of clinical instruction in the wards of a lunatic asylum for the same period of attendance in the medical wards of a general hospital.'"

The thanks of the profession are due to the College of Physicians, for so promptly responding to the petition. It would be wise to make this *compulsory* for the membership of the College, especially as an examination in Psychological Medicine is here required.

All General Hospitals should have a Lecturer on Insanity attached, but we regret to say this is at present not the case; we should also like to see a professorial chair at the Universities in Psychology the highest branch of our profession.

MURDERS BY MADMEN.

The mediæval aspect of our streets may have been somewhat impaired by the removal of the palsied and ulcerated limbs, the scars and stumps showing how "fields were won"—which constituted constant appeals to the philanthropic and patriotic—to their legitimate homes, the hospital and the workhouse; but we conceive that decency, decorum, and genuine humanity have gained by the process. In like manner, it may be romantic, as it certainly is economical, to domesticate the insane in cottages and homesteads throughout the land, and to permit them to range unfettered and unguarded through our lanes and lawns, but the personal safety and moral health of many members of the general community, as well as the happiness and interests of the sufferers themselves, would be infinitely better secured were they consigned to asylums or workhouses. This conviction has recently been pressed upon us—first, by the continued advocacy of the disposal of lunatics in

private dwellings by a public board in the North; secondly, by the frequent reports of frightful tragedies committed by individuals, previously supposed to be sane or only partially insane, but whose irresponsibility was subsequently established by their self-destruction, or when tried as criminals; and, thirdly, by the following startling recital, contained in the Report of the Broadmoor Criminal Lunatic Asylum for 1874: "Of the 20 cases of homicide admitted in 1874, 9 were men and 11 women. Of the 9 men who had taken life, 1 had killed a fellow-patient in a county asylum, and 7 had killed persons nearly related to them; the relationship being in 3 cases that of child, in 2 cases that of wife, in 1 that of mother, and in 1 that of sister-in-law. In the remaining case the patient had, whilst stationed in India, taken the lives of 3 of his native servants, whom he suspected of attempting to poison him. With respect to the 11 women, the victims were in 10 cases their own children; and in 7 of those cases the mothers were, at the time of committing the act, suffering from insanity connected with the puerperal state."

The following translation recounts a series of horrible events, which, although taking place in another country, belong to the same category:—

"There are in many French villages individuals who are altogether irresponsible for their acts. They wander from place to place, exciting sympathy, but more frequently terror. They are disregarded, or they are the objects of mirth, do not call forth the interference of the legal authorities, and, when danger is threatened, objections and obstacles are presented against their seclusion. Energetic measures are never resorted to until the last extremity. Thus, perhaps, the frightful tragedies at St. Maurice may have the effect of directing more care and supervision over this numerous class of the insane.

"J. M——, long an inhabitant of the village of St. Maurice, Avergnon, served in the Marines, afterwards returned and settled in Breuil, where he married. His wife died, leaving one child; and he afterwards married again, having a family of two children. After the lapse of about seven years M. suffered from indisposition. With physical powers rather above than below the ordinary standard, he was of feeble intellect. His undeveloped faculties and wavering judgment easily lost their equilibrium under the slightest agitation. This condition was manifested under painful circumstances. Awakened by the light of a fire in an adjoining farm, he imagined his own cottage was involved in the conflagration, this impression eventuating, after a few days, in an attack of epilepsy. During several paroxysms of violent excitement following attacks of epilepsy, M. was regarded as a dangerous person. A quarrel with his wife induced one of these attacks, when, in his fury, he seized her by the hair, and struck her head repeatedly and violently upon the pavement. Alarmed by her cries, the neighbours removed the assailant, secured his hands with a leather belt, and shut him up, placing his injured victim in bed in an adjoining house. Infuriated by the escape of his wife, M., in his solitude, gnawed through the bonds by which he was secured, liberated himself, and armed with a billhook rushed forth in pursuit, and like a wild beast leaped through the window of the house where she had taken shelter. The terrified inmates fled leaving the poor woman at the mercy of

the madman, who, tranquilly commanding her to rise and dress, killed her with one blow of the weapon he carried. After this murderous assault, roused to a state of furibund rage he destroyed a cat which was the first living thing he encountered, then hurrying onward to another village, he assaulted and killed by a blow on the head the widow S. who was at work in a field. On his way to another hamlet he met the clergyman of St. Maurice, on his way to see a sick person and, at the moment, enquiring the way from Mr. D., who was accompanied by his child. The latter perceiving and wishing to avoid M., who he remarked was in a state of excitement, the unfortunate priest said, 'Take no notice of him, and he will take no notice of us.' M. passed, but forthwith returned and clove the head of the Abbé in two. Mr. D. seized his child and fled, at first followed by the murderer, who, however, stopped suddenly and rushed or rather flew taking leaps of four or five yards, with implacable rage towards the corpse of his last victim, whose head he again struck, and whose features were so mutilated by his blows that they could not have been recognised. This crime perpetrated, he then entered the house of an aged pair (coopers), and, without offering a word or a menace, struck off the head of the husband; assailing the wife she parried off the blow with her arm, but the stroke cut off her hand, and she afterwards died of the wound. The infuriated being sought for other victims. A petty farmer and his wife shut themselves up on the approach of the destroyer, but, of their two children who were engaged in herding the poultry, he immolated one about nine years old by a single blow, and the other was only saved by concealing herself in a wood. Immediately afterwards he entered the stable of T., who was at the time asleep, there seized an iron fork, and at once prostrated the half-awakened sleeper in death. This was the seventh murder. Although pursued and almost caught by the inhabitants of the commune, after receiving the discharge of a fowling-piece, he was able to reach another village where he was ultimately arrested. Now, armed with the fork only, he attempted to assail the child of B., who, seeing the danger, seized a bar of iron and interposed between them. M., either cowed or cunning, exclaimed, 'You are my comrade, I do not seek you; give me your hand.' B. replied, 'Good; but people do not shake hands with such weapons as your fork—throw it down.' The madman complied; B. took his hand, and after a terrible struggle, in which he was assisted by the bystanders, he succeeded in throwing down and choking his formidable antagonist and in preventing him from doing further injury. The struggling and vociferating captive was transported to Orleans, where calm succeeded to extreme excitement, and where he assured those around that he regretted the injuries inflicted, and that he was unconscious of what he was doing. He is restrained by a strait-waistcoat." *

We are sorry to state that a number of crimes in England have recently been committed by lunatics, both at large and in asylums. Religious insanity is on the increase, and has been the cause of many

* Extract of the *Independent de Montargis*, April 1875, in the *Annales Médico-Psychologique*, July 1875, p. 156.

of the homicides committed by lunatics. We give one, as taken from the *Times*:—

PARRICIDE.—Thomas Johnson, aged 35, murdered his father and mother at Fordham, a village about seven miles from Colchester. The names of the victims are Solomon Johnson, aged 80, labourer, and Susannah, his wife, aged over 70. The scene of the crime is a treble-tenement cottage on an off-hand farm held by Mr. Knight, and situated in a lonely spot some 400 yards from the highroad, and a considerable distance from any neighbours. The centre tenement was occupied by the Johnsons; the wings by a woman named Mills, and by four orphan children whose mother lay dead in the house. This description will help to explain the particulars of the murder, as they have been stated by the police. Thomas Johnson for many years behaved exceedingly well as a son, but recently suffered from a religious mania and a suspected love affair, so that he was in the local union some weeks under treatment. Having got better, he was allowed to go out and to go back to his parents' house, whence a few days after he came to Colchester for a change. His conduct was observed to be very strange, and he suddenly left the house of his sister and went roaming about the town; among other acts going to consult a lawyer about his lady-love, whom he described as having been seen by him in "a glorified state." The demented man left Colchester, and slept at his parents' house at Fordham. Next morning, at 7 o'clock, Mrs. Mills's attention was called to some cries of "Murder!" and she saw the accused, poker in hand, chasing his father and mother in the garden. The old man, after receiving some blows, fell into an ashpit, and was then despatched by his maddened son. The poor man had his head shattered in a fearful manner. Johnson next attacked his aged mother, and beat her so that he left her for dead. Meanwhile, Mrs. Mills, who was much frightened, locked up the four orphan children, of whom she had kindly taken charge, and ran for assistance. The man must have seen her, for he threatened to kill her, and pursued her a short distance. It was a fortunate circumstance that the children had been locked in, for the man broke the window in an attempt to get at them, and he exclaimed to them, "I'll kill you!" Mrs. Mills went to the parish constable (there being no policeman in the village), who sent forward Mr. Sparkes and Mr. Partridge. These found the murderer making his way to the village, and after some manœuvring they closed upon him; one of them, however, receiving a severe blow with the poker, which the madman still carried in his hand. However he was overpowered, and ultimately lodged under lock-and-key in the union workhouse at Stanway. The neighbours attended Mrs. Johnson, who was alive and sensible, but she died before medical aid could reach her. The prisoner, while under the charge of the porter at the union-house, coolly admitted having murdered his parents; and said that something struck his mind all of a sudden, and he believed he was the Almighty, and had to do it. The policeman stationed at Stanway (Richardson) received the man into his custody, and said to him, "I understand that you have committed murder this morning?" The accused replied, "Yes, I have killed two—my father and mother." Johnson, who is a short thickset man of unprepossessing appearance, was conveyed to Colchester, and taken before the county magistrates then in session, with Mr. P. O. Papillon, chairman. In reply to questions, he stated the names of his parents; and after some formal evidence had been given, he declined to ask any questions, but said, "No, I am fully decided about it."

The prisoner was committed for trial, and was confined during the interim in the Springfield County Gaol; whilst there he became very

violent and excited, and had to be removed as a raving maniac, in chains, by order of the Secretary of State, to Broadmoor Criminal Lunatic Asylum.

There are some persons at the present day who deny the existence of Religious Insanity. Religious excitement frequently gives rise to religious eccentricity, and this is followed by religious insanity and its consequences, either homicide or suicide, if steps are not taken to protect the patient.

THE CAMBRIDGE POISONING CASE.—At the Cambridge Assizes George Lanham, aged 33, was arraigned before Mr. Justice Grove, on the charge of having murdered his son George, aged 3½ years, on the 2nd of December last. The prisoner lived in Coronation Street, New Town, Cambridge; and during the absence of his wife, who is a college bed-maker, he took means to poison himself and four of his children. In order to effect this, he sent the servant-maid with a note to a distant part of the borough, directing her (she being a stranger) to take a certain roundabout route. On her return the house was fastened up, and upon an entrance being effected the prisoner and his children were discovered in a profound sleep, lying on the bed upstairs, two of the little ones being held in the father's embrace. From the efforts which were made by Dr. Paget and others all of the sufferers recovered, excepting the little boy George, who succumbed to the effects of the poison within 26 hours. Prisoner afterwards said he was not sorry for what he had done, and expected he should be hanged for it. He was not sorry for his children, as it would take them out of this world of sin. The defence set up was that the prisoner was subject to melancholia, and was irresponsible for his actions. In support of this theory considerable evidence was given. The Jury, after a brief deliberation, acquitted the prisoner on the ground of insanity, and he was ordered to be detained until Her Majesty's pleasure be known.

We congratulate the jury here upon their verdict, for at the present day, when the popular idea is prevalent, that a man is to be held responsible for his actions if he is cognisant of the severity of his crime, and knows the difference between right and wrong, it is a rare thing to get a sensible jury to think otherwise. In this case he evidently knew of the atrocity of his act as well as the consequences.

Many cases of suicide by lunatics have been reported from Vienna, and there appears to have been a sort of "suicidal epidemic."

AN EXTRAORDINARY AFFAIR.—About ten o'clock at night Mr. Hare, of Baswick Farm, near Stafford, having gone to bed, was aroused by a knocking at the door. It was found that the person knocking was a man, who was apparently greatly alarmed, and said that two men were following to shoot him. Mr. Hare and his men-servants searched the farm-yard, but could not see any one. They returned to the house, and asked the stranger into the kitchen, when he immediately seized a table-knife and stabbed two of the men-servants. Mr. Hare then came to their assistance, and, loading a gun, fired over the man's head to frighten him. This not having the desired effect, he fired two shots at his legs, and the man was overpowered. The police and surgeons were sent for, and about twelve o'clock the man died. He is supposed to be John Linner, of Walsall, and he is believed to have been suffering from *delirium tremens*.—*Scotsman*, September 14, 1875.

IDIOT TRAINING.

Discussion has lately taken place respecting the responsibility of lunatics in asylums; we, however, defer, in consequence of want of space, from entering at present into the subject.

Sir Charles Trevelyan, on behalf of the Charity Organisation Society, has moved the following resolution in Council relative to the training of idiots:—

1. That, as by the census returns of 1871, there were in England and Wales 29,452 idiots or imbeciles, which number is admitted to be 25 per cent. below the mark, showing a total of 36,835, or 1 in every 621 of the population; and as the condition of many youthful idiots can be altogether altered and improved by adapted training, while a large proportion of the remainder are quite unfit to mix with ordinary members of society—and union-houses and lunatic asylums are, for many reasons, unsuitable receptacles for idiots—training-schools should be provided for improvable, and permanent asylums for unimprovable idiots.

2. That, in order to elicit the sympathy and active co-operation and support of the wealthy and charitable, the training-schools should, as far as possible, be conducted upon the voluntary principle, and that with this object the managers of existing asylums depending upon public subscriptions for their support be invited to modify their rules, so as to make their institutions available as part of a national system.

3. That, besides the general objections to the canvassing and voting system as a means of admission to charitable institutions, it is in an especial manner inapplicable to making provision for idiots, inasmuch as their successful treatment depends upon their being selected at the proper age to be placed either in a training-school or permanent asylum, according to the nature of their respective cases.

4. That the Government be memorialised to allow the capitation-grant of 4s. a week to be paid for poor idiots admitted into training-schools or permanent asylums, in the same way as it is now allowed for pauper idiots placed in county lunatic asylums, and also a further capitation-grant to training-schools, to be paid out of the Parliamentary Grant for Education, provided such schools comply with the conditions which may from time to time be prescribed by the education department, and are open to inspection by the officers of that department; and that further payments be made by friends who are able to do so, or by boards of guardians.

5. That exertions should be made to establish the necessary additional number of training-schools on this principle throughout the country; and that permanent asylums for unimprovable cases needing supervision, shelter, and kind care, should be established upon the grounds of the county lunatic asylums or elsewhere, either singly or for two counties combined; the expense of building and maintenance being defrayed out of the county rates, aided by the Government capitation-grants, and by the contributions of the boards of guardians and the friends of the idiots.

6. That, in order to facilitate the establishment of training-schools and permanent asylums, the Government be asked to introduce a Bill especially for the regulation of idiot asylums, releasing such asylums from the stringent regulations of the Lunacy Act, 8 & 9 Vict., cap. 100, which was passed before any idiot asylum existed, such release being in accordance with the recommendations of the Lunacy Commissioners in their reports to the Lord Chancellor for the years 1865 and 1868.

PSYCHOLOGY AT THE BRITISH MEDICAL ASSOCIATION.

At the recent meeting of the British Medical Association several interesting matters connected with Insanity were discussed.

Dr. Lowe, the President of the Psychological Section, delivered an address before the Society. He informed the members that Dr. Browne of Dumfries, formerly Commissioner in Lunacy for Scotland, had by his brilliant skill and energy in the study of Insanity, caused the study of psychological medicine to advance in the country, and we most heartily and earnestly endorse this opinion. No man, whether in Scotland or any other country, has worked harder in the science of Psychology, with his whole heart engaged in a task, which to him was a labour of love, than our most esteemed friend Dr. Browne, and to him is due the great progress made in psychological medicine in Scotland. Dr. Lowe informed the Society that asylums throughout the country were at the present day a credit to our humanity and civilisation; and, instead of being dens or mere receptacles for the insane, each might be regarded as a school of psychology, and Dr. Lowe thinks that before many years have passed away a Professor of Psychological Medicine will be appointed in the University of Edinburgh. After making some remarks upon the importance of this subject, and the progress made by the "Psychological infant" during the last thirty years, the President passed on to the general business of the association.

Dr. Alexander Robertson, of Glasgow, read a paper on "Observations on the Unilateral Phenomena of Mental and Nervous Disorders."

He stated that unilateral mental phenomena consisted of hallucinations and illusions, and perhaps of the peculiarities supposed to be due to the separate and independent action of the hemispheres. Special allusion was made by Dr. Robertson to the French writers, and as illustrations of his paper, cases of one-sided hallucinations of hearing were cited from Gall, Schröder van der Kolk, and Greisinger. Practical experience of the examination of 250 cases of insanity referring to sensorial disturbance were then quoted. In thirty-four patients who entertained well-defined hallucinations of one or more of the senses, five of these auricular delusions were heard only in the left ear; in five others sounds were apparent more in the left ear than in the right, and in one they were audible only in the right ear. After briefly alluding to the disorders occurring in the other senses, particulars relating to cases of unilateral auditory hallucinations were given. The phenomena, we are told, were most liable to occur in sub-acute cases of insanity, but more especially in those due to mental aberration caused by alcoholic liquors. The hallucinations were most striking in the left ear, and the pathology of the phenomena was discussed at length. The following conclusions were then stated: 1st.—Convulsive movements may begin in different parts of the body in the same case, even though there is no reason to think there is any appreciable change in the cerebral lesion. 2ndly.—In unilateral convulsions the so-called bilateral muscles are often implicated, but the twin muscles of the otherwise sound side in most cases do not contract so firmly as

those on the side first convulsed. The physician may, therefore, often ascertain for himself, in a case of general convulsions, the side on which the convulsive movements first began (and, consequently, the hemisphere affected), by simply grasping the limbs of the two sides, and comparing the degree of firmness of their respective muscles. 3rdly.—There may be *alternate* conjugate deviation of the eyes during the same convulsive seizure. 4thly.—As a general rule, the higher up the lesion is situated, the more apt the convulsions are to become bilateral. 5thly.—When convulsions begin on one side, there is frequently a distinct and sometimes a prolonged interval before consciousness is involved, and it is occasionally retained throughout the whole seizure. 6thly.—There is a decided increase of temperature in the convulsed members.

A paper was then read by Mr. Howell, of Clapton, upon “Emotional Aphasia.”

The distinction here drawn between this variety of aphasia and what is generally understood by us to indicate the disease was that the former is of temperate duration, and not the result of organic disease. As an illustration, a lad of sixteen years of age, with an interval of first six and then eight weeks, lost all power of speaking, but not of thinking or writing. These symptoms were apparent on the first occasion for twenty-four hours, on the next for forty-eight, and on the third occasion for one hundred and twenty. After each attack the patient recovered perfectly.

In the first instance, the attack was brought on from prolonged effort of talking combined with excitement and anxiety.

As an explanation of the pathology of this complaint, it was assumed that the vaso-motor nerves were the seat of this disorder. The case appears to us to be a peculiar one, and we shall be glad to receive any further history or development of symptoms which may occur.

Dr. Sibbald then read a paper on “Statistics of Lunacy in Town and Country.”

He showed in his paper that the number of pauper lunatics in Scotland persistently chargeable to country parishes was greatly in excess of the number chargeable to towns; the number of the former being 206 per 100,000, and 177 per 100,000 for the towns.

Arguments were propounded, to show that the enormous increase of lunacy in Scotland was only apparent and not real. The opinions here expressed we unhesitatingly endorse, after careful inspection of the Lunacy Report for Scotland, and we agree with Dr. Sibbald, that there is no statistical proof that there is a larger amount of real insanity now than there was thirty years ago.

Dr. Boyd read a most interesting paper, “On the Effects of Various Diseases on the Weight of the Several Parts of the Encephalon in 2,050 Same and Insane Adults of Both Sexes.”

Dr. Boyd founded his statement on the results of thirty years' careful and practical experience. He found that by comparing the weight of the male and female encephalons, the difference in the male over that of the female was from four to five ounces. Most careful tables of the respective weights of various portions of the nervous

system in the respective sexes, both in health and in disease, were then given.

The conclusions here arrived at were, that the difference between the weight of the encephalon of the insane, as compared with that existing where no insanity was present, might be estimated at the rate of $\frac{3}{4}$ of an ounce in the male, and $1\frac{1}{4}$ ounce in the female, heavier than in a sound mental condition. The average weight of the brain in various diseases was then discussed, and it was found that in diseases of the nervous system the increase in the weight of the brain was chiefly apparent. The paper of Dr. Boyd was a most interesting and instructive one, and we trust that he will be persuaded to publish it *in extenso*.

A paper was then read by Dr. McDiarmid, of Murthly, upon the "Hypodermic Injection of Morphia in Insanity." Special reference was given to its use in melancholia, acute mania, and general paralysis.

The experiments as to its action in the various diseases are very interesting, and we think that it is one of the most valuable remedies we have in treating a certain class of mental maladies, and the cases here cited appear certainly to have improved under its administration.

Dr. Ferrier gave the results of some interesting experiments on the brains of monkeys, with special reference to the localisation of sensory centres in the convolutions.

Dr. Ferrier will no doubt publish this interesting paper.

During the meeting of the British Medical Association at Edinburgh, two papers were read, by Dr. Peddie and Dr. Bodington, on the "Advisability of Controlling and Restraining Habitual Drunkards."

We have learned nothing new from these gentlemen, and the opinion expressed by them, that legislation is necessary in dealing with dipsomaniacs, and the arguments brought to bear upon the subject, were fully discussed in the last number of the Journal, and we do not intend at present to allude to the subject.

We must congratulate the British Medical Association on the success achieved in their Psychological Section, and the thanks of the Association are due to those gentlemen who so kindly assisted in the further advancement of Psychology.

RECENT APPOINTMENTS.

- Birt, Ernest, M.R.C.S. Eng., has been appointed Assistant Medical Officer to the Salop, and Montgomeryshire Counties Lunatic Asylum, Bicton near Shrewsbury, *vice* Talbot, resigned.
- Callcott, J. T., M.R.C.S.E., Assistant Medical Officer to the Durham County Lunatic Asylum, Sedgfield.
- Cobbold, C. S. W., M.D., L.R.C.P. Edin., M.R.C.S.E., Assistant Medical Officer to the Metropolitan Asylums District Asylum for Lunatics, Leavesden.
- Cooke, E. M., M.R.C.S.E., Senior Assistant Medical Officer and Deputy Superintendent to the Worcester County and City Lunatic Asylum, Powick, *vice* Gowan, appointed Medical Superintendent of the Toronto Lunatic Asylum, Canada.
- Davies, F. P., M.B., C.M., M.R.C.S.E., Assistant Medical Officer at the State Lunatic Asylum, Broadmoor, appointed Senior Assistant Medical Officer to the Kent County Asylum, Barming Heath, near Maidstone.
- Gowan, C., M.D., C.M., L.R.C.S. Edin., Senior Assistant Medical Officer at the Worcester County and City Lunatic Asylum, Powick, appointed Medical Superintendent of the Toronto Lunatic Asylum, Canada, *vice* J. Workman, M.D., resigned.
- Harrison, H. B., M.R.C.S.E., Second Assistant Medical Officer to the Metropolitan Asylum District Asylum for Imbeciles, Caterham.
- Hetley, Henry, M.R.C.S. Eng., Resident Clinical Assistant to St. Luke's Hospital.
- Hickson, A. T., M.B., L.R.C.S.I., Assistant Officer to the Lancashire Lunatic Asylum, Rainhill, *vice* De Denne, resigned.
- Isaac, J. B., L.R.C.P. Edin., Assistant Medical Officer to the Broadmoor Criminal Lunatic Asylum, *vice* Davies, appointed Senior Assistant Medical Officer to the Kent Lunatic Asylum, Barming Heath, near Maidstone.
- Lewis, W. B., L.R.C.P. Lond., Clinical Assistant, West Riding Asylum, Wakefield.
- Lovett, H. A., M.R.C.S.E., L.M., Second Assistant Medical Officer to the Worcester County and City Lunatic Asylum, Powick, *vice* Cooke, appointed Senior Assistant Medical Officer and Deputy Superintendent.
- Merrick, A. S., M.D. Q. Univ. Irel., L.R.C.S. Edin., L.A.H. Dub., Resident Medical Superintendent of the Antrim Lunatic Asylum, Belfast, *vice* Stewart, deceased.
- Mickley, George, M.B., C.M. Cantab., Resident Medical Superintendent, St. Luke's Hospital, *vice* Eager, resigned, on becoming proprietor of Northwoods Asylum, near Bristol.

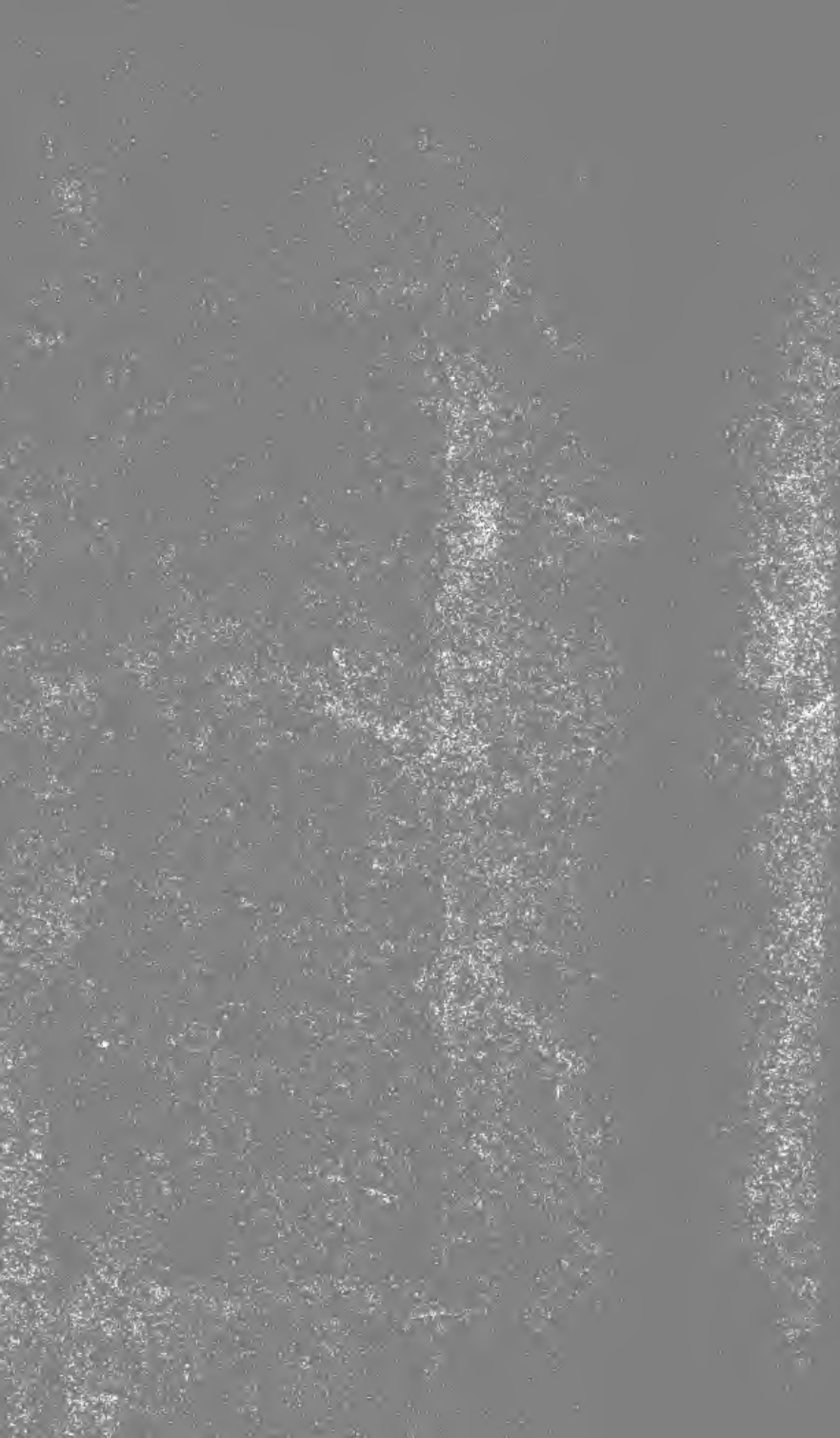
- Odium, Dr., Assistant Medical Officer to the Durham County Lunatic Asylum, Sedgfield, *vice* Bishop, whose appointment has expired.
- Petit, J., L.K.Q.C.P.I., L.M., L.R.C.S.I., Resident Superintendent, Donegal Lunatic Asylum, Letterkenny, *vice* Merrick, appointed to the Antrim Lunatic Asylum, Belfast.
- Shapter, Lewis, B.A. Cantab., Consulting Physician to the Wonford House Hospital for the Insane, Exeter.
- Thompson, E. C., M.B., L.R.C.S.L., L.M., Consulting and Visiting Physician to the Tyrone and Fermanagh Lunatic Asylum.
- Thornley, J. G., M.D., L.R.C.S. Edin., Assistant Medical Officer to the Leicestershire and Rutlandshire Lunatic Asylum, Leicester, *vice* Dixon, resigned.
- Wallis, J. A. M., L.R.C.P. Edin., L.R.C.S. Irel., Resident Medical Superintendent of the Hull Borough Lunatic Asylum, *vice* Carson, resigned.
- Woods, Oscar T., M.D., Senior Assistant at the Warwick County Asylum, Medical Superintendent to the Killarney District Asylum, *vice* Murphy, M.D., deceased.

We are requested to state that Dr. Wilberforce Arnold has been appointed Honorary Secretary to the Belfast Branch of the Royal Medical Benevolent Fund Society of Ireland, in the place of the late eminent Dr. Robert Stewart, deceased (late Resident Superintendent, District Hospital for the Insane, Belfast).









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